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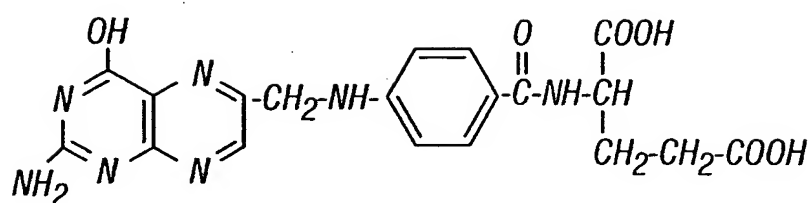
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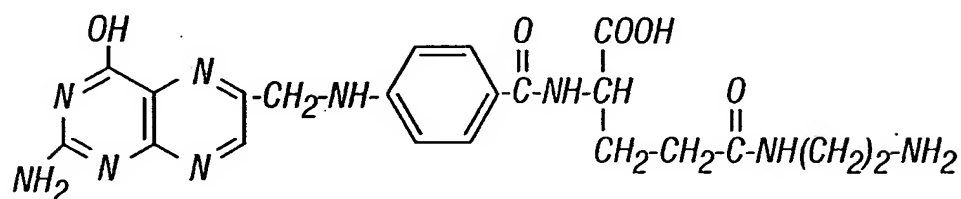
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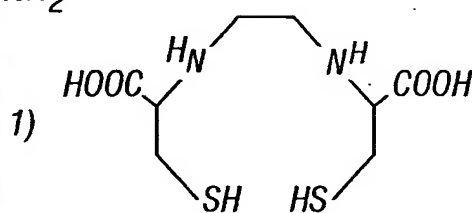


*Folic Acid*

*Ethylenediamine*  
*EEDQ*

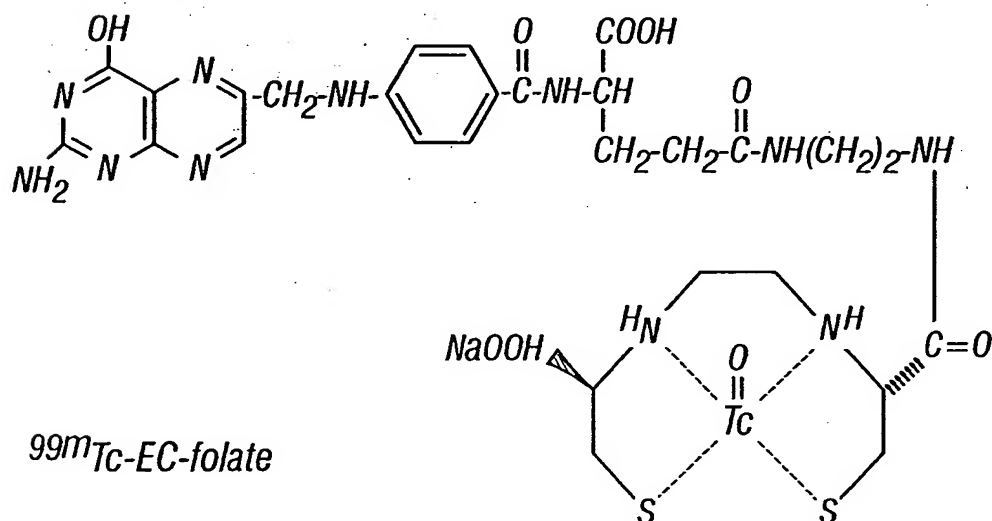


*Folate NH<sub>2</sub>*



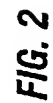
(EC), Sulfo-NHS, EDC

2)  $\text{Na}^{99\text{m}}\text{TcO}_4 / \text{SnCl}_2$



*$^{99\text{m}}\text{Tc}$ -EC-folate*

**FIG. 1**



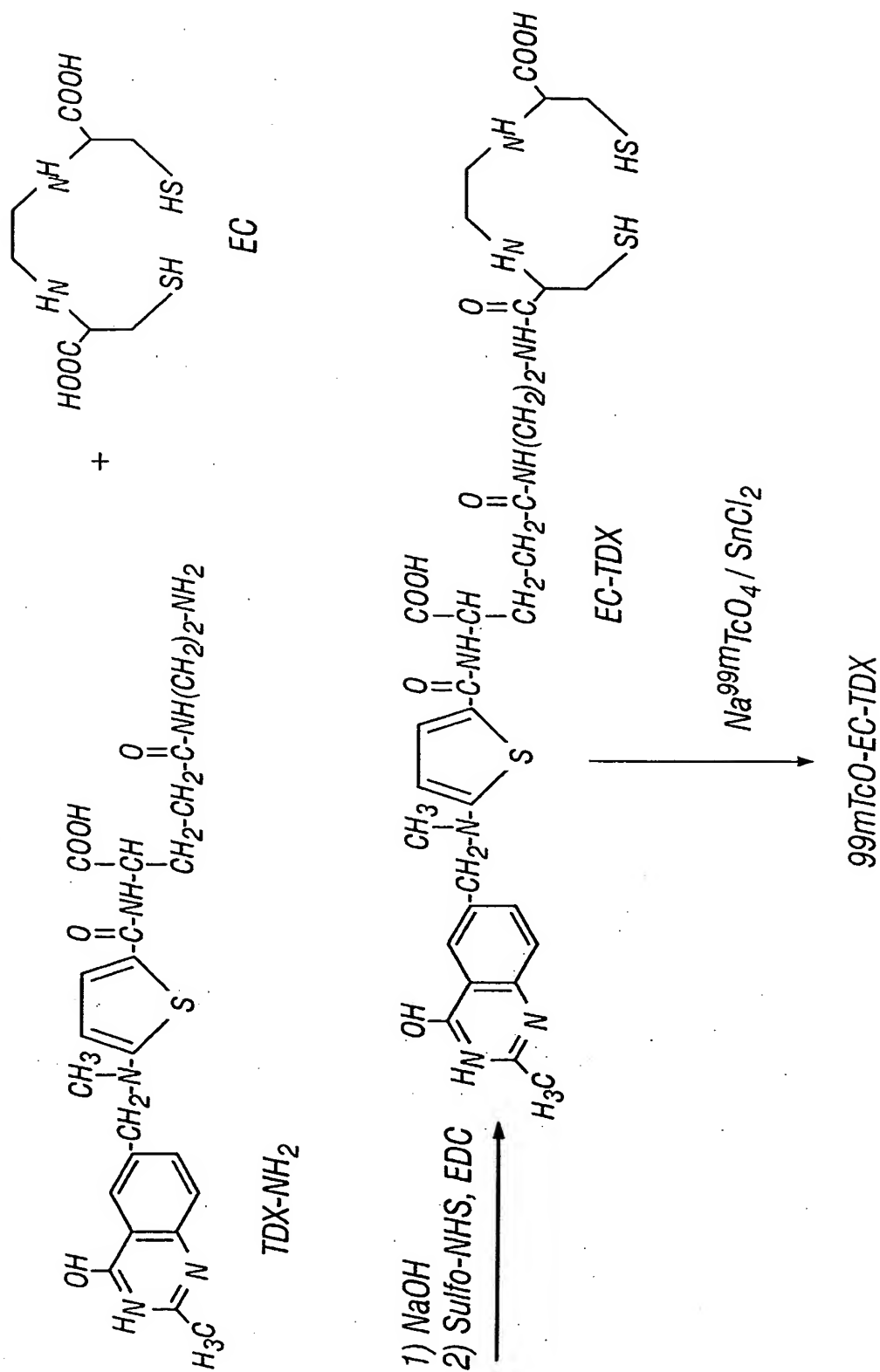


FIG. 3



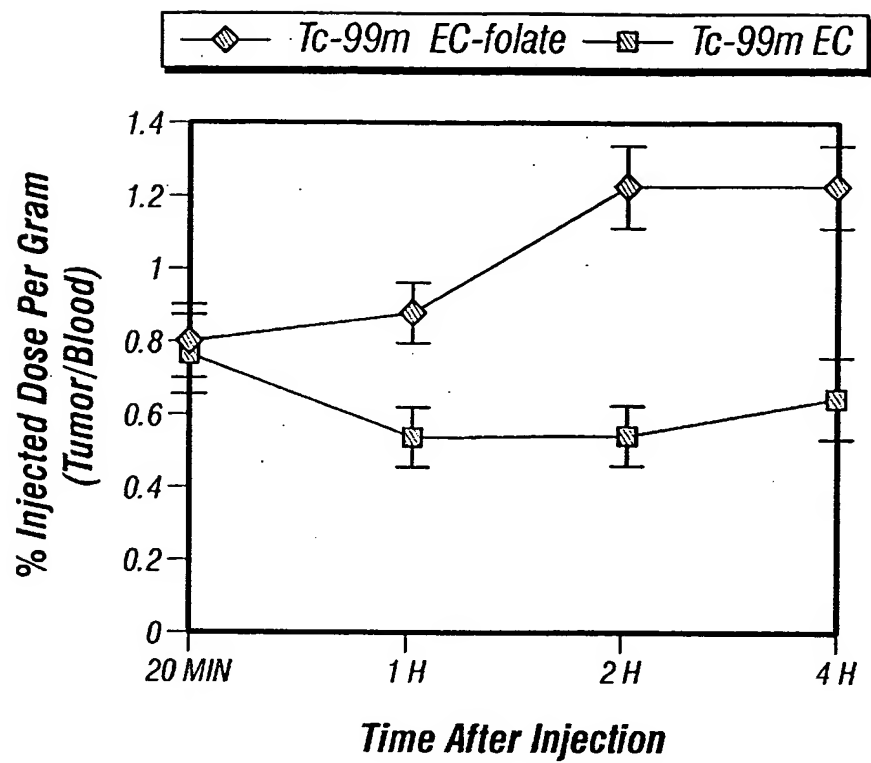


FIG. 4

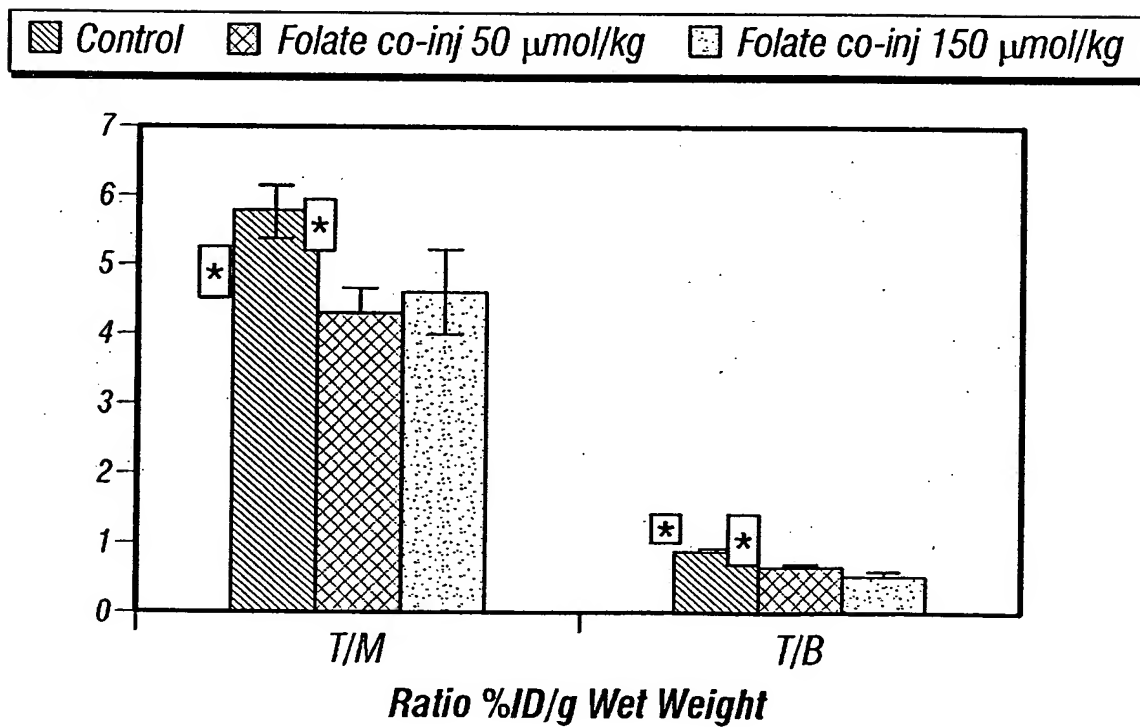


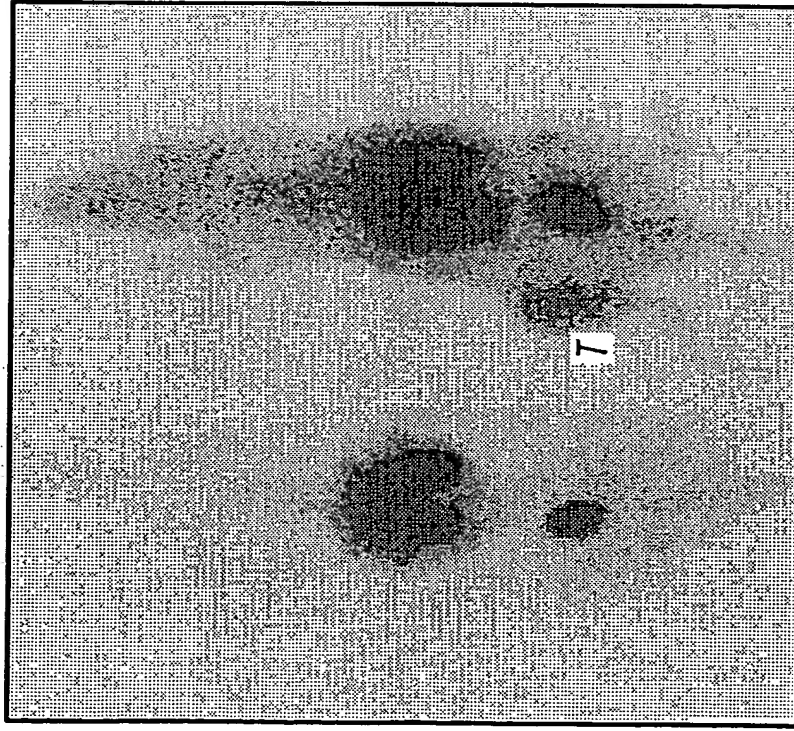
FIG. 5

*Tc-99m EC*

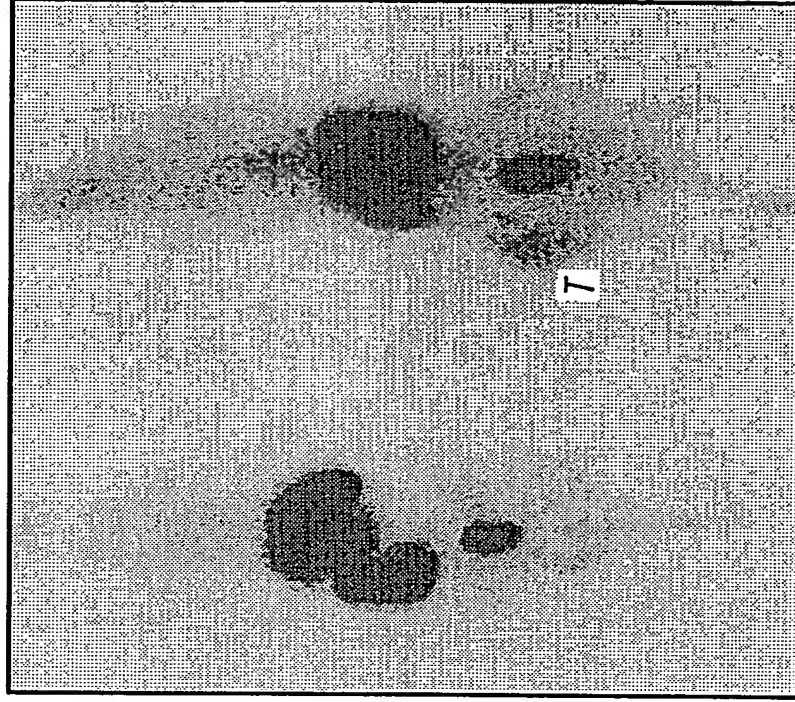
*Tc-99m EC-folate*

*Tc-99m EC*

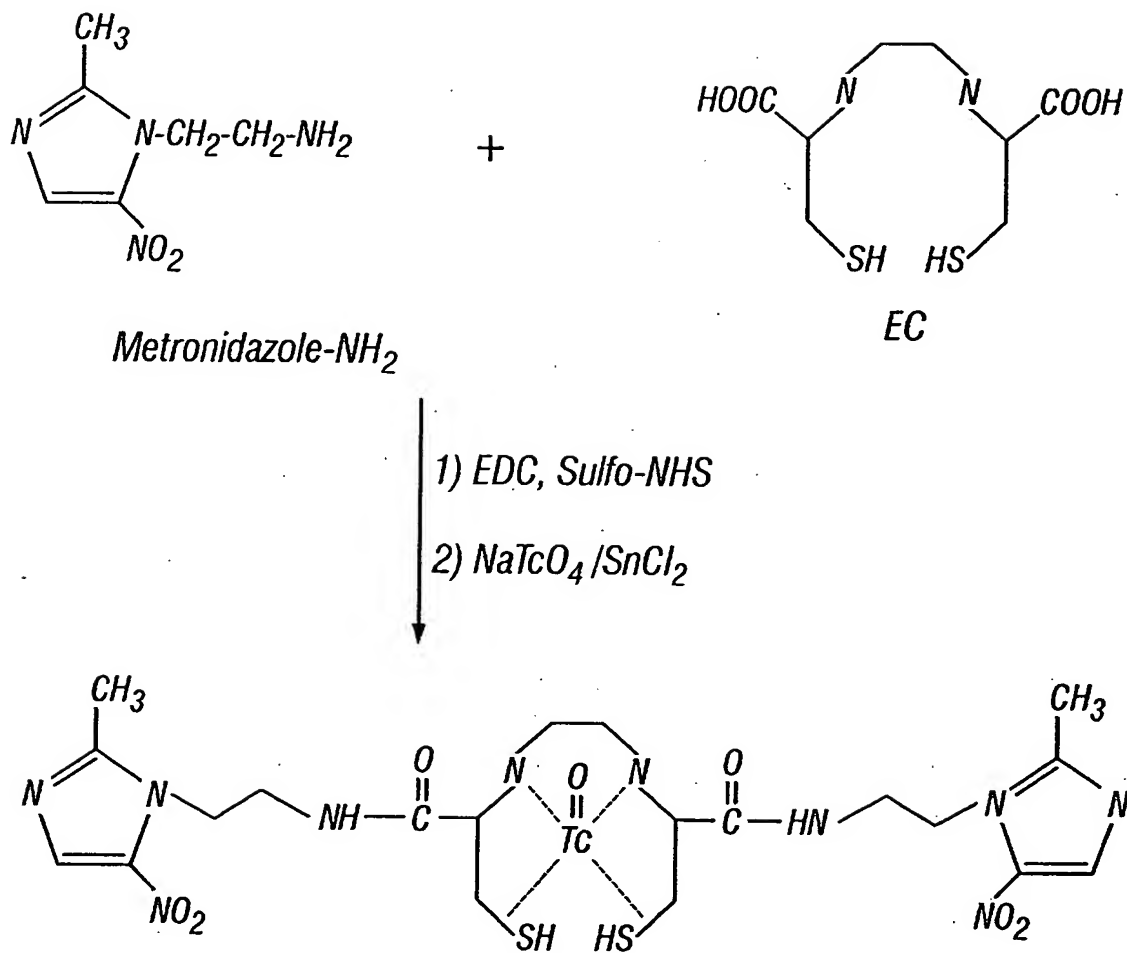
*Tc-99m EC-folate*



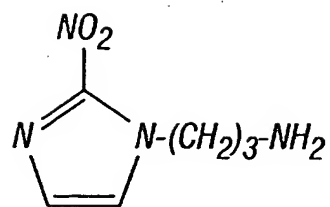
**FIG. 6A**



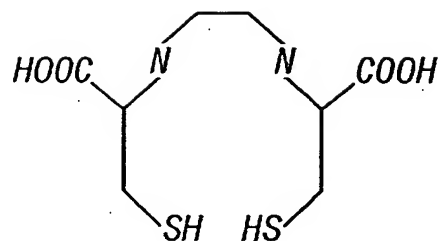
**FIG. 6B**



**FIG. 7**



2-Nitroimidazole-NH<sub>2</sub>



EC

1) EDC, Sulfo-NHS  
2) NaTcO<sub>4</sub> / SnCl<sub>2</sub>

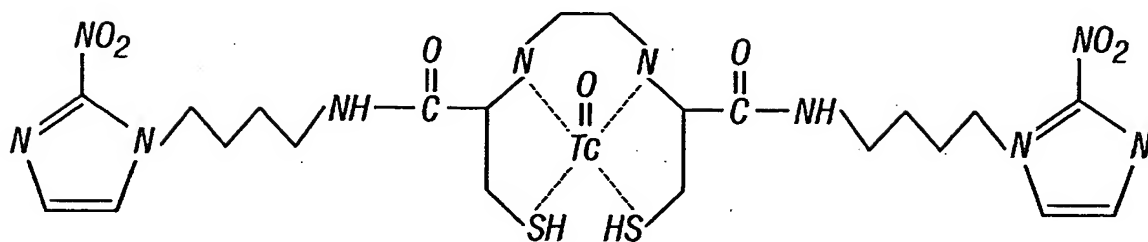
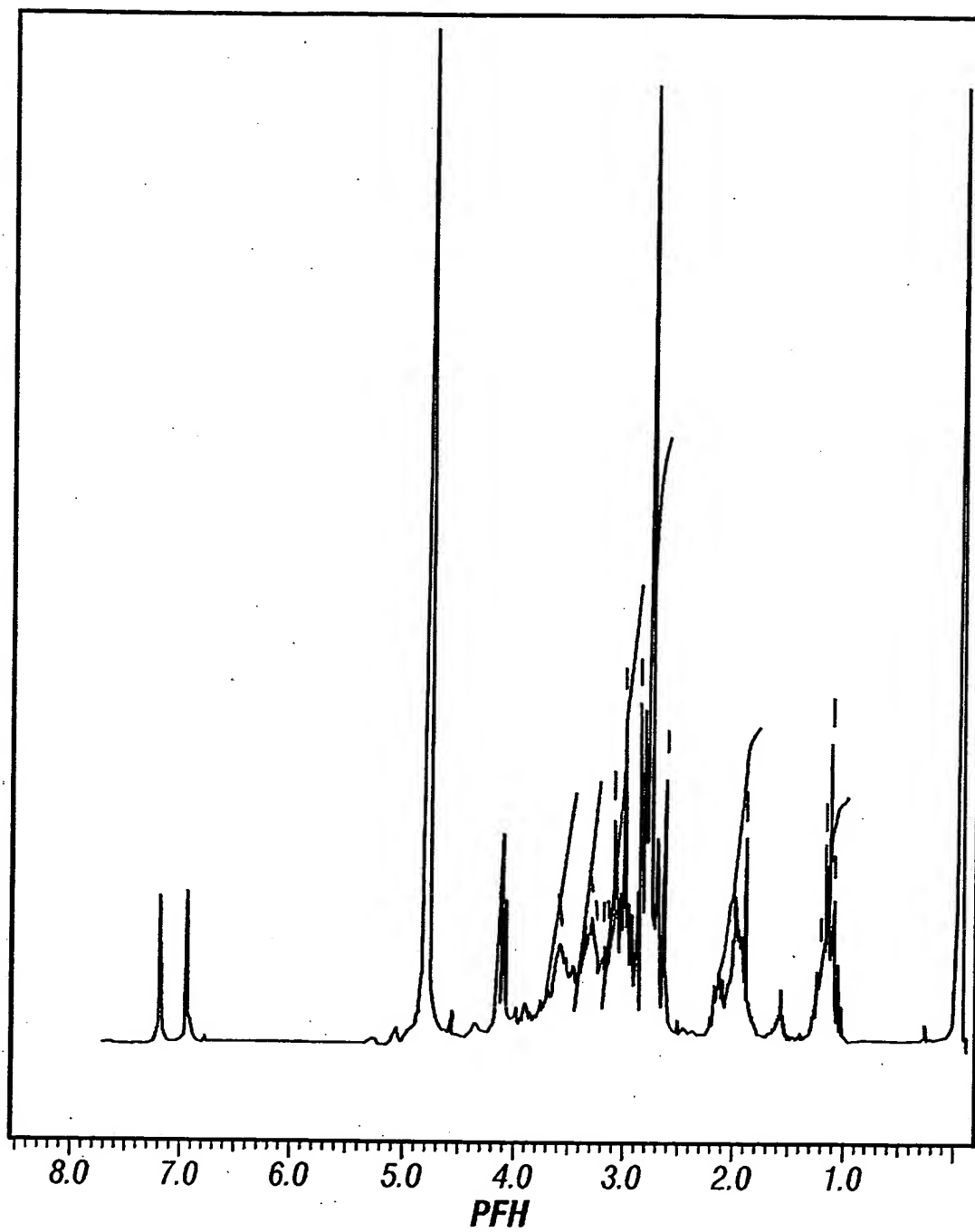


FIG. 8A



**FIG. 8B**

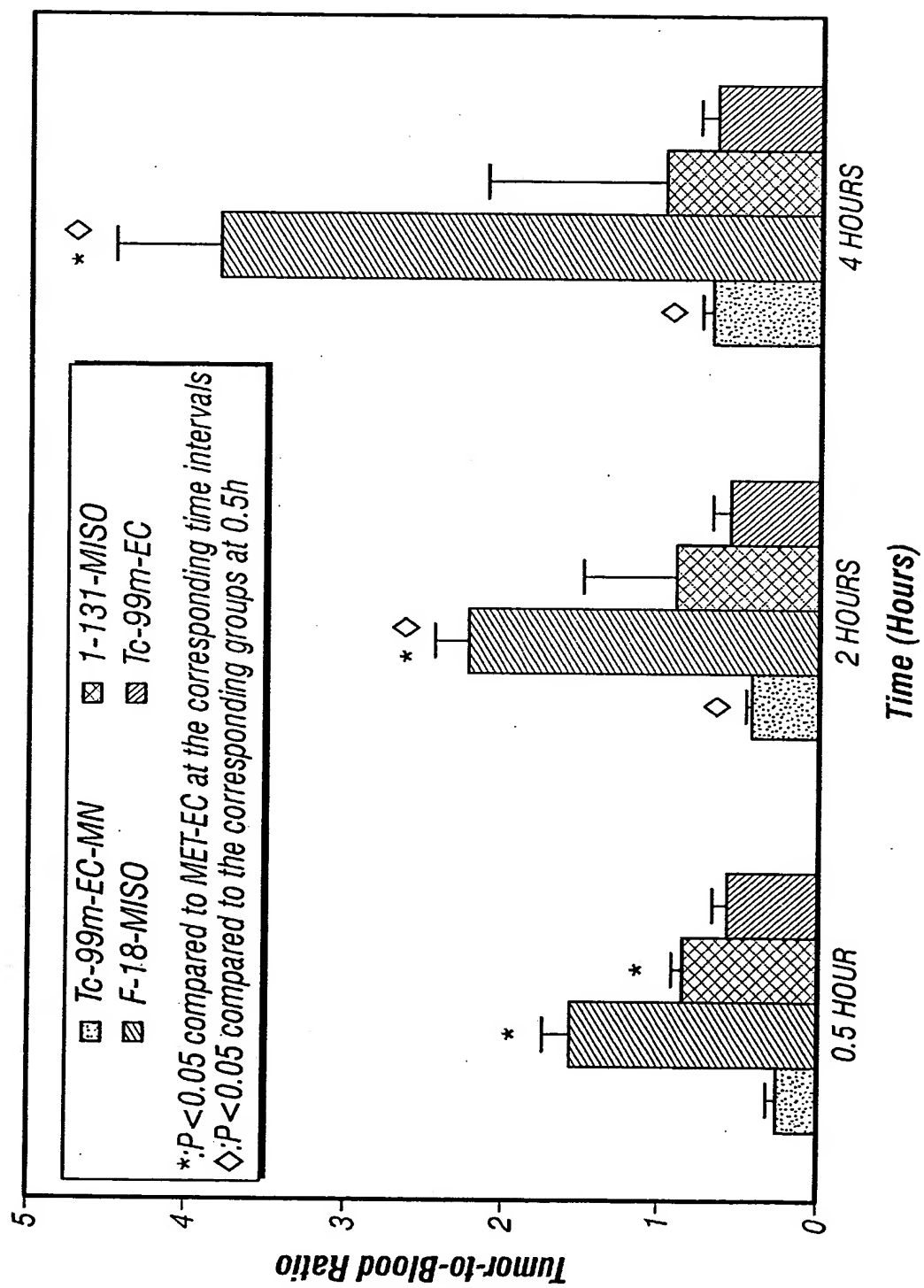


FIG. 9

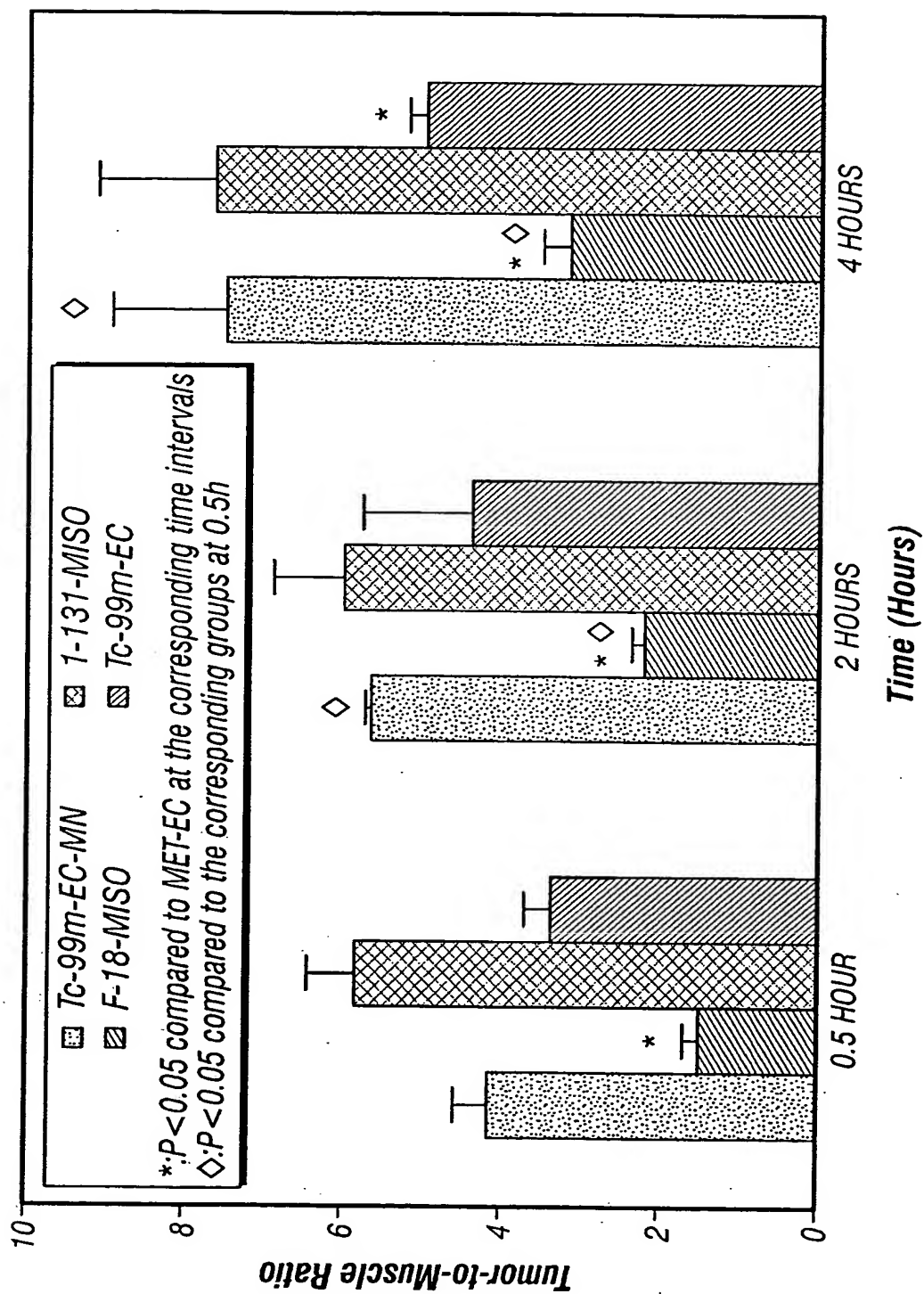
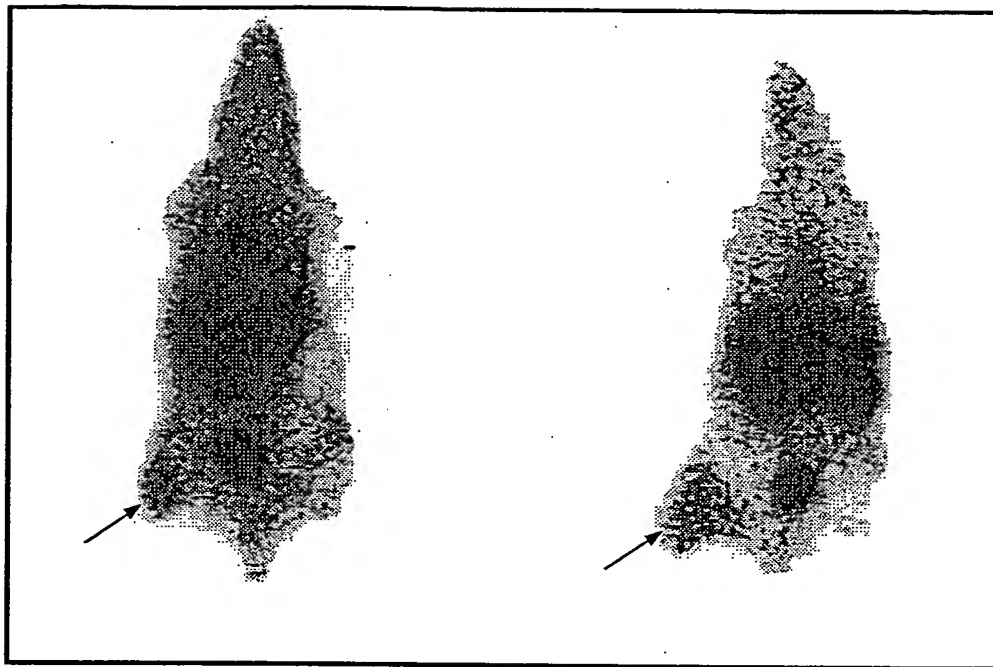
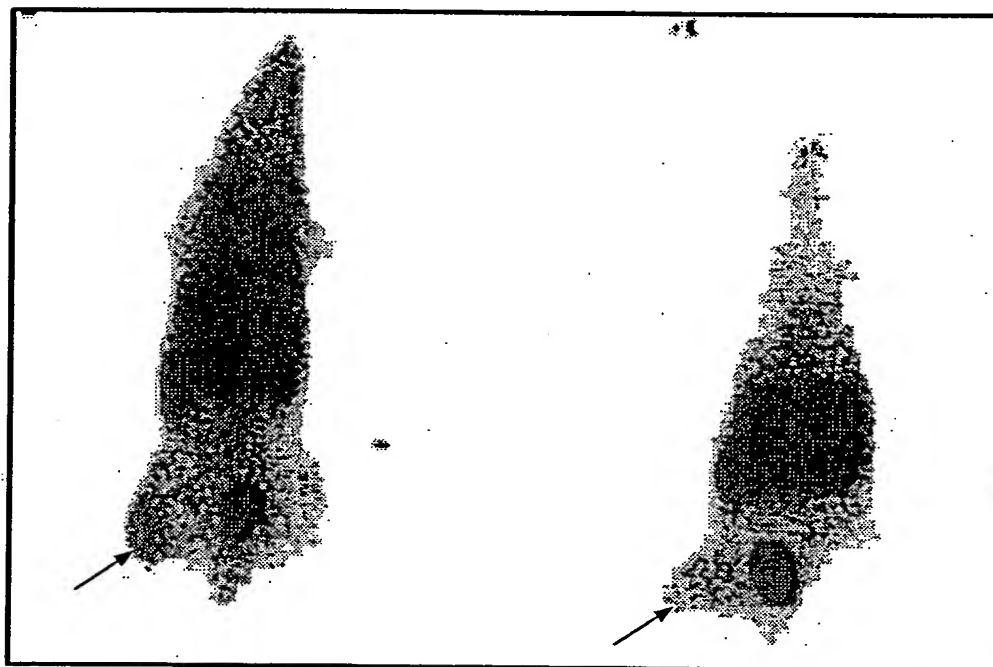


FIG. 10

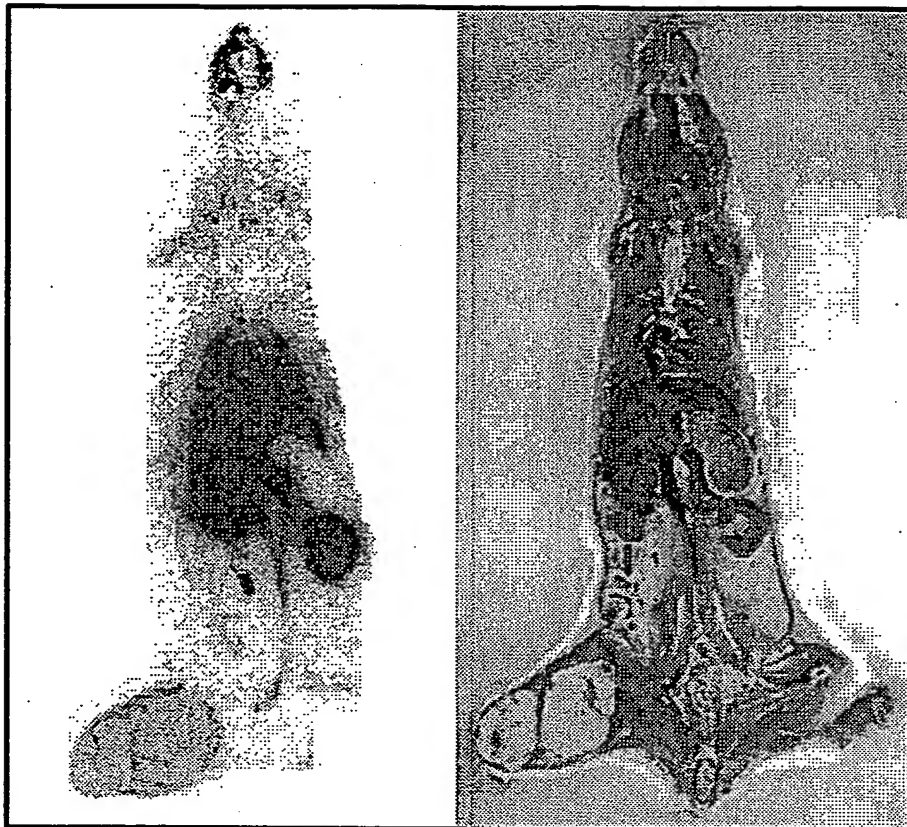


**FIG. 11A**



**FIG. 11B**





**FIG. 12**

3-10-1999

EC-(2-HIM)2 after adding serum 3

Date: Mar 10 1999

Start time: 16:02

Accum time: 00:00:50

Data File:

Plate: 1 Lane: 1

Elect Resolution: NORMAL

(Amp. Range: 0 - 2047)

Stop counts: 50000

Stop Counts Region: 0.00 to 20.00 cm

Rf Calculations: Origin: 1.50 cm

Solvent Front: 19.00 cm

Integration Parameters: Auto Integration

Peak slope: 1.0

Min width: 0.1

Min %: 2.0

Total Count Region: 0.00cm to 20.00cm

Total Counts: 53170

Total CPM: 63810

Reg. #	Start (cm)	Stop (cm)	Center (cm)	Rf	Region Counts	Region CPM	% of Tot Reg	% of Tot Cn
1	0.60	4.40	2.50	0.06	4557	5468	9.02	8.5
2	8.20	16.80	12.56	0.63	45980	55180	90.98	86.4
TOTAL					50540	60650	100.00	95.0

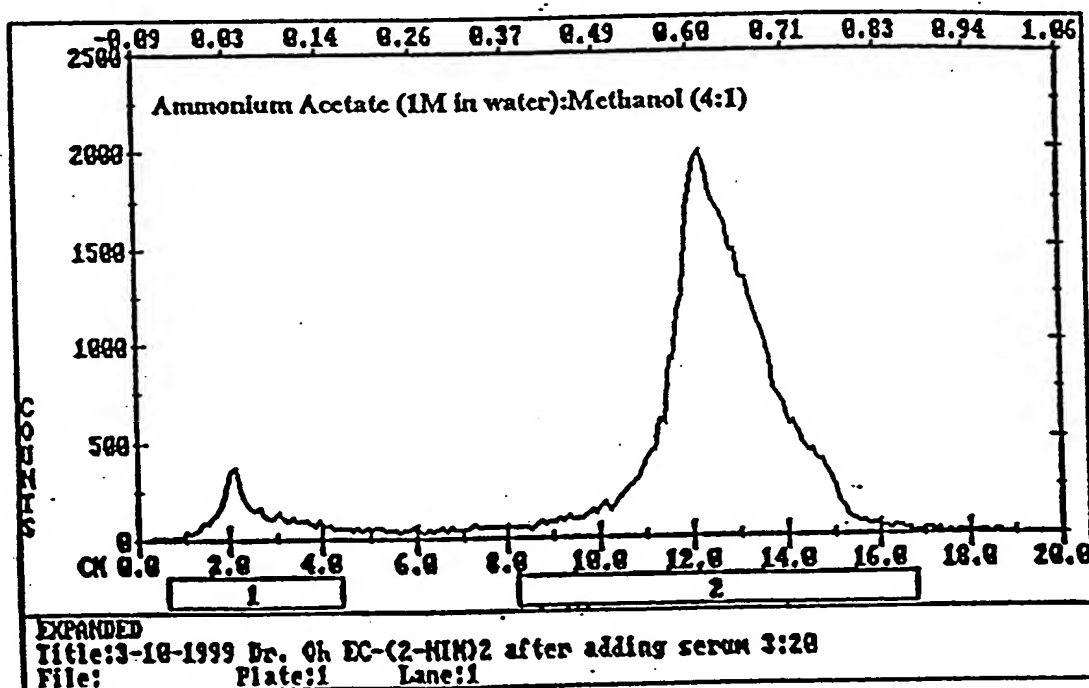
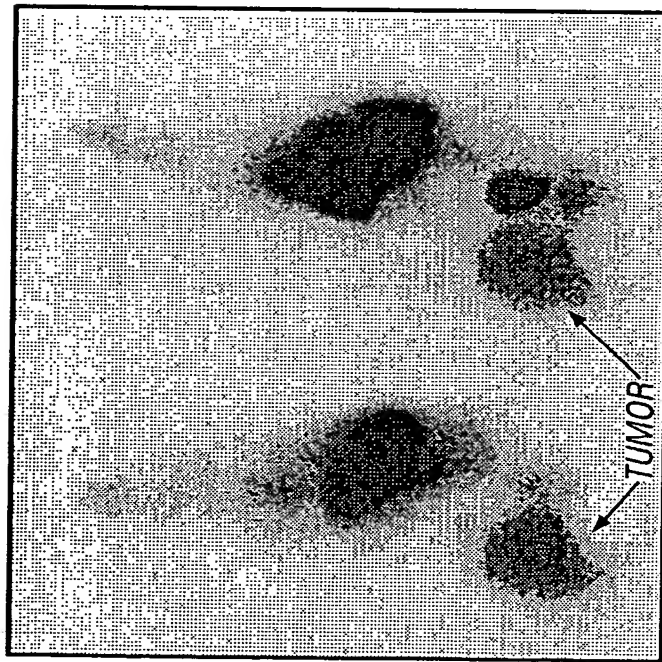
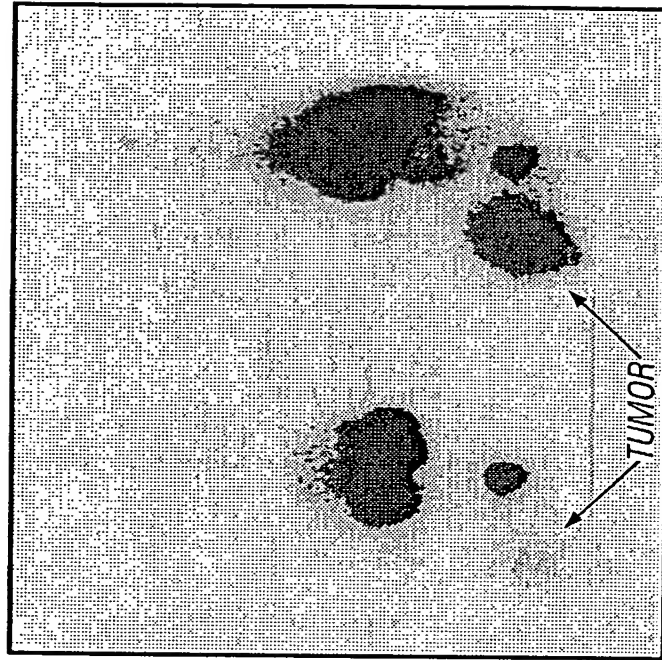


FIG. 13

$^{99m}\text{Tc-EC}$        $^{99m}\text{Tc-EC-NIM}$        $^{99m}\text{Tc-EC}$        $^{99m}\text{Tc-EC-NIM}$

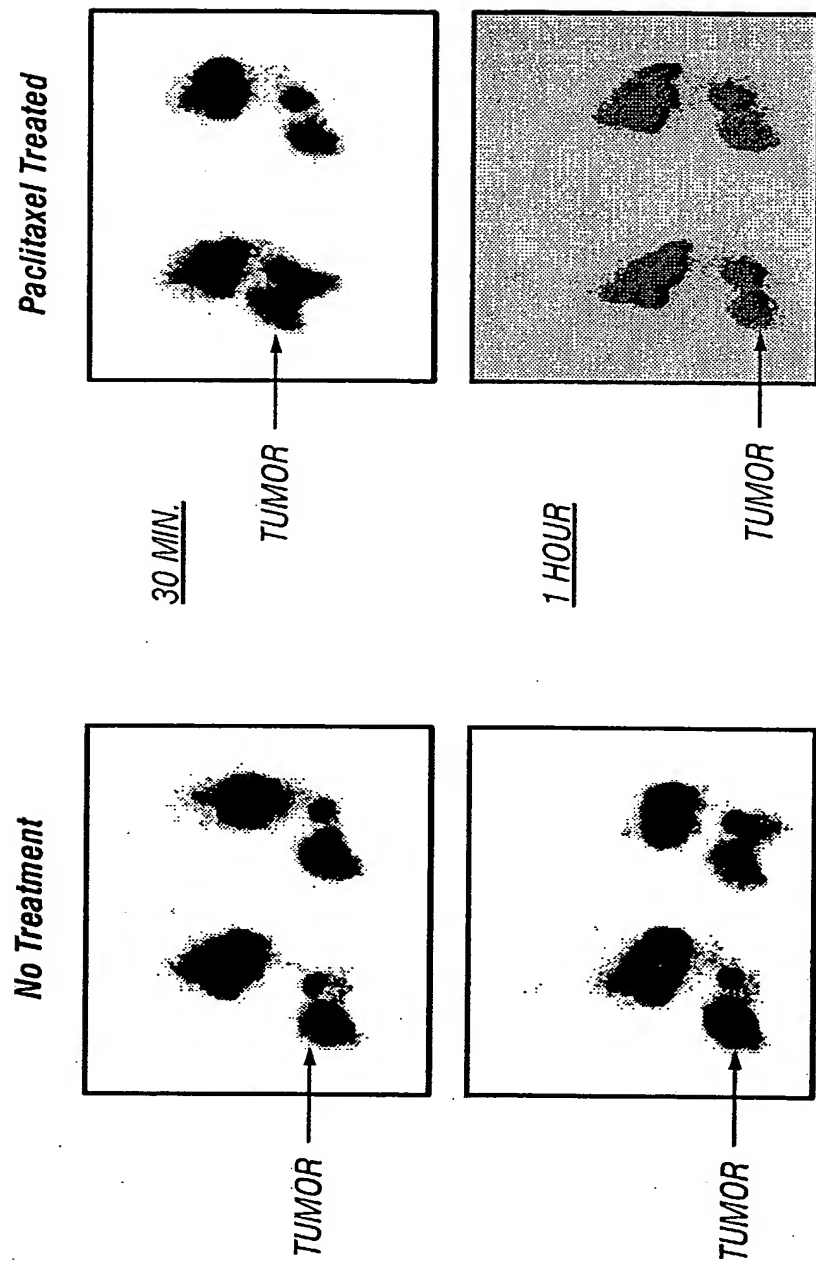


15 MIN.



4 HOUR

FIG. 14A



**FIG. 14B**

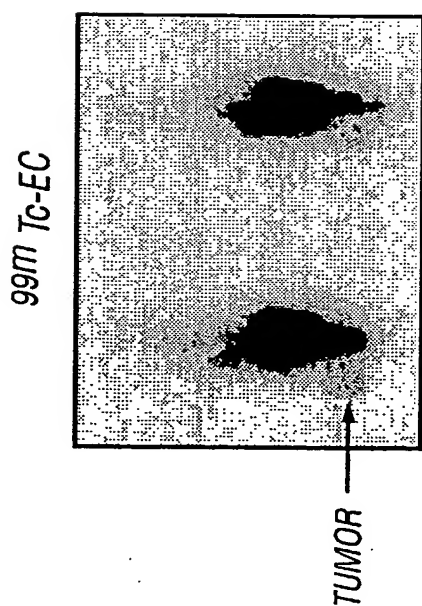
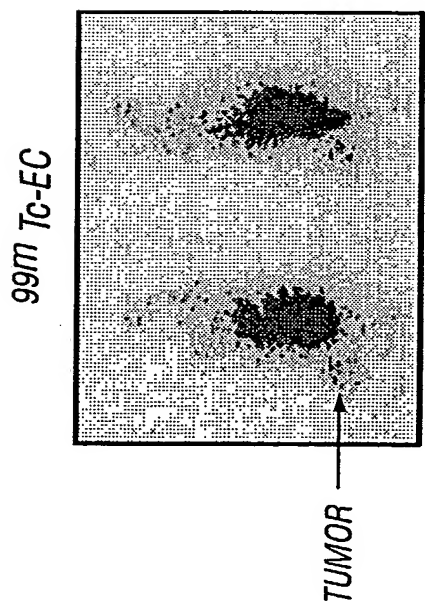
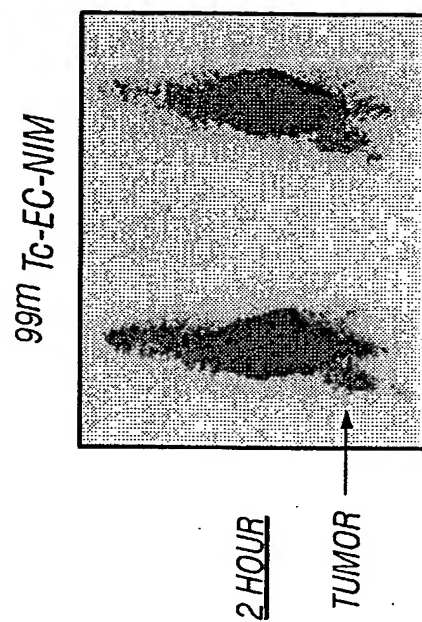
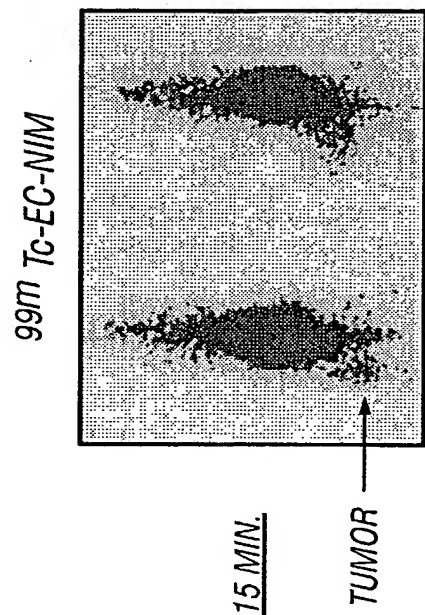


FIG. 15A

*99m* Tc-EC-Nitroimidazole (NIM)  
(100 $\mu$ Ci/mouse, iv.)

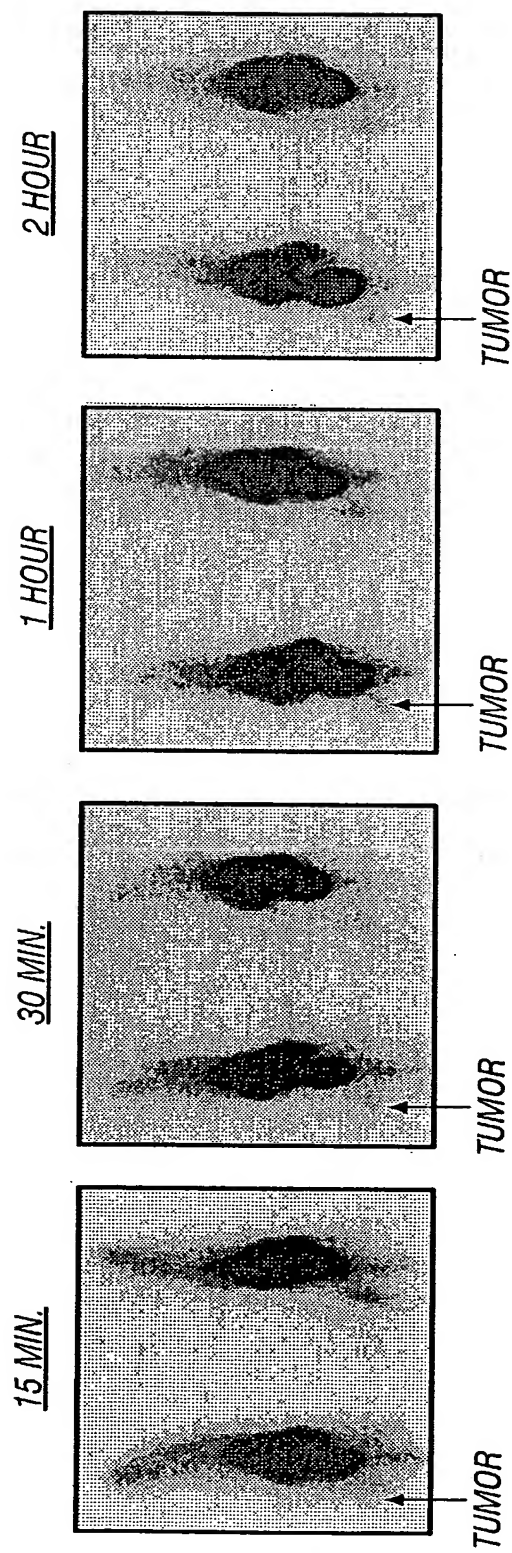
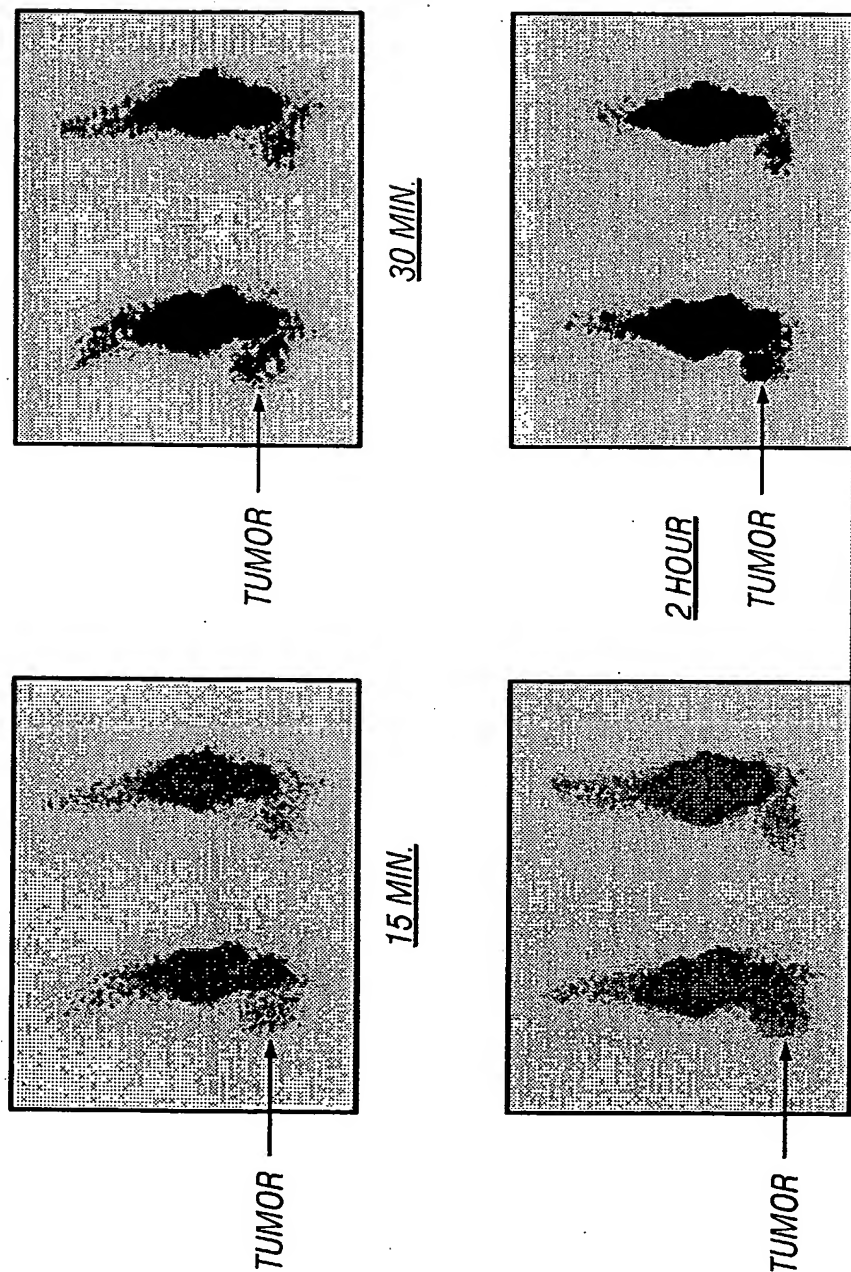


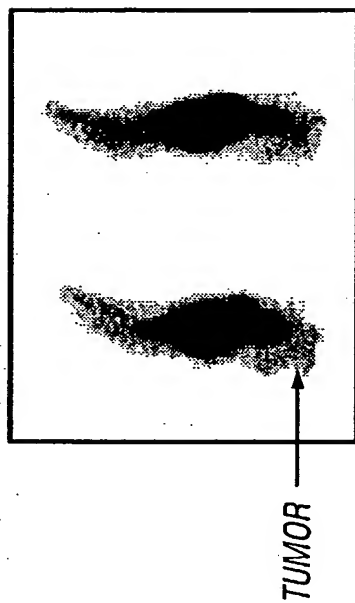
FIG. 15B

*<sup>99m</sup>Tc-EC-Nitroimidazole (NIM)*

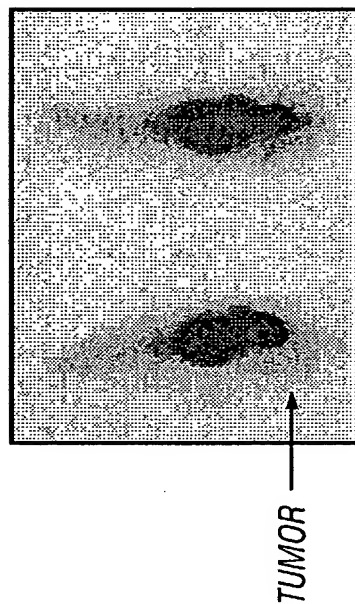


1 HOUR 2 HOUR 30 MIN. 15 MIN. **FIG. 15C**

*99m* Tc-EC-Nitroimidazole (NIM)  
(100 $\mu$ Ci/mouse, iv.)



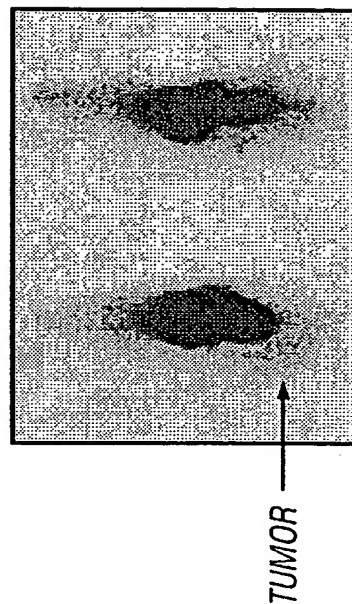
15 MIN.



30 MIN.



1 HOUR

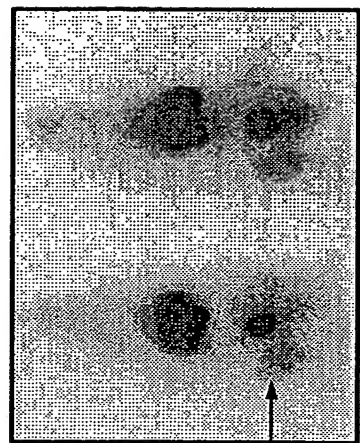


2 HOUR

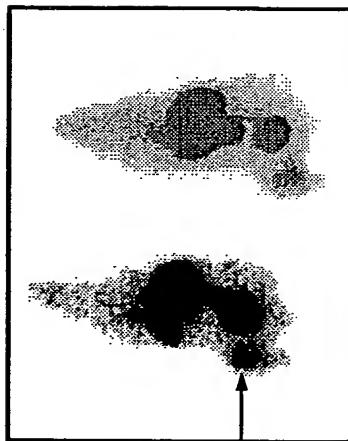
FIG. 15D



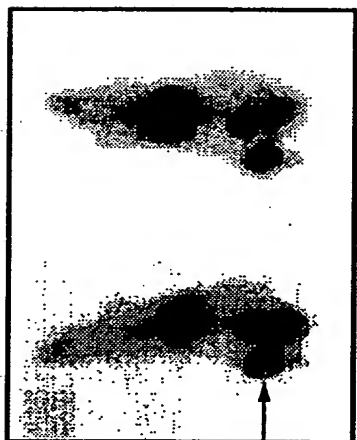




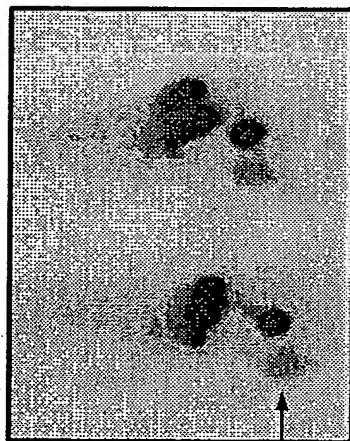
30 MIN.



2 HOUR

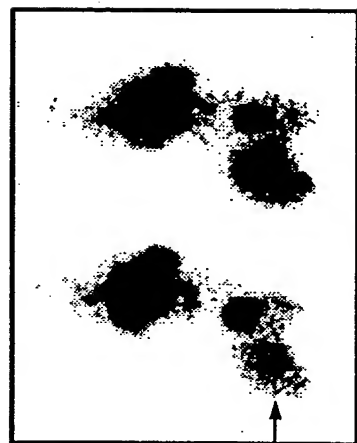


15 MIN.



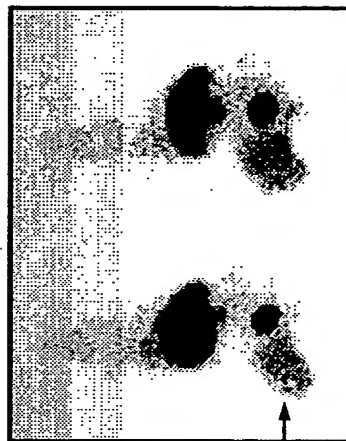
1 HOUR

**FIG. 17**



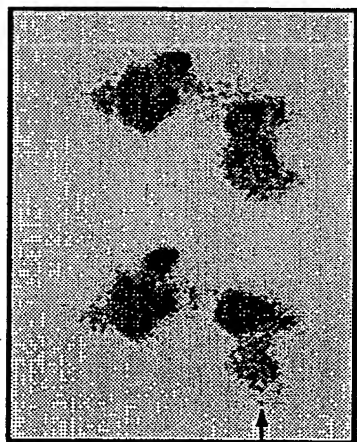
30 MIN.

TUMOR



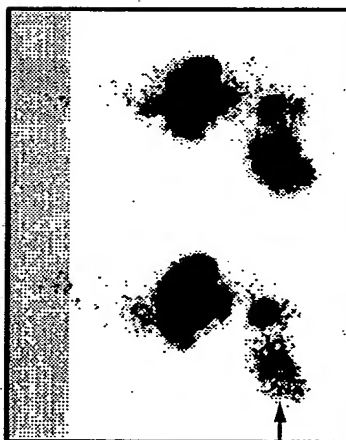
2 HOUR

TUMOR



15 MIN.

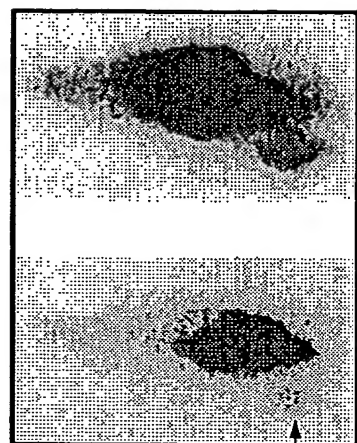
TUMOR



1 HOUR

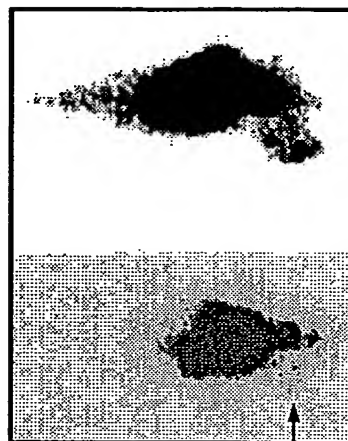
TUMOR

FIG. 18



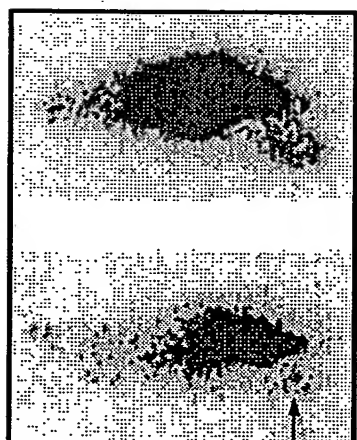
TUMOR

30 MIN.



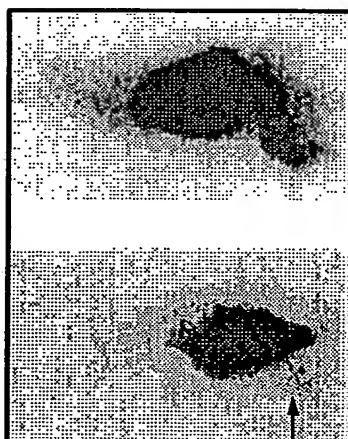
TUMOR

2 HOUR



TUMOR

15 MIN.



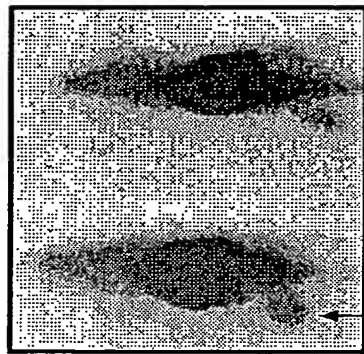
TUMOR

1 HOUR

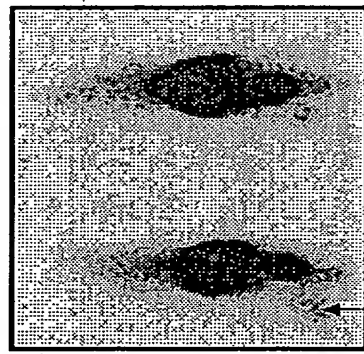
FIG. 19A

*$^{99m}\text{Tc}$ -EC-Annexin V  
(100  $\mu\text{Ci}$ /mouse, iv.)*

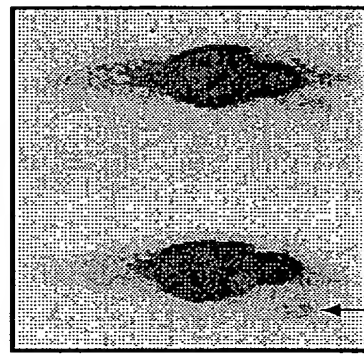
15 MIN.



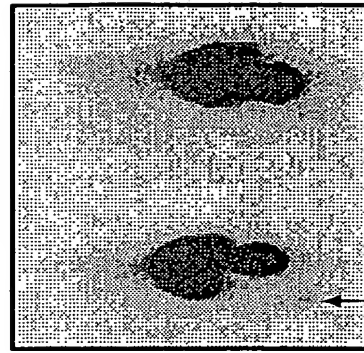
30 MIN.



1 HOUR



2 HOUR



**FIG. 19B**

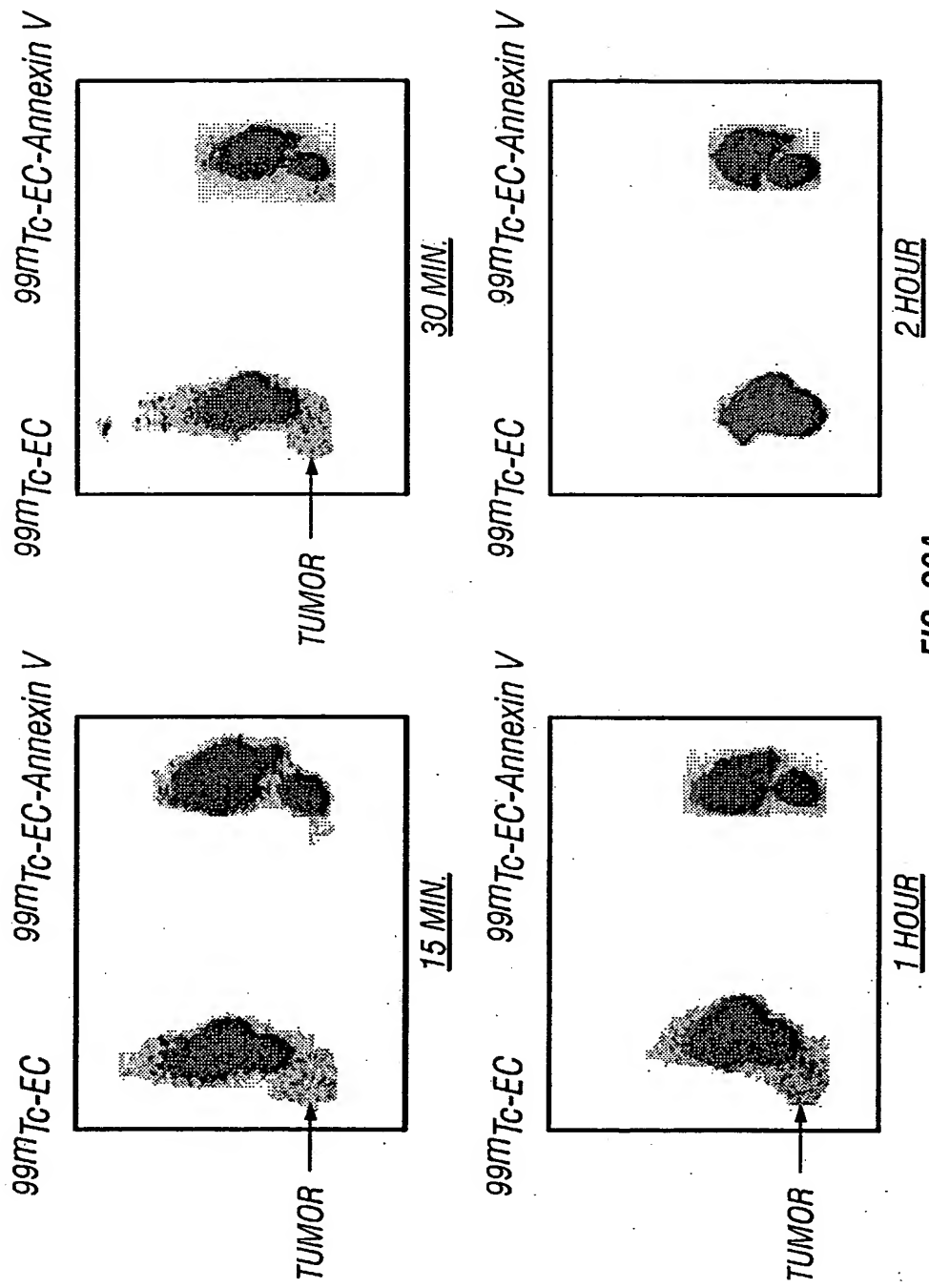
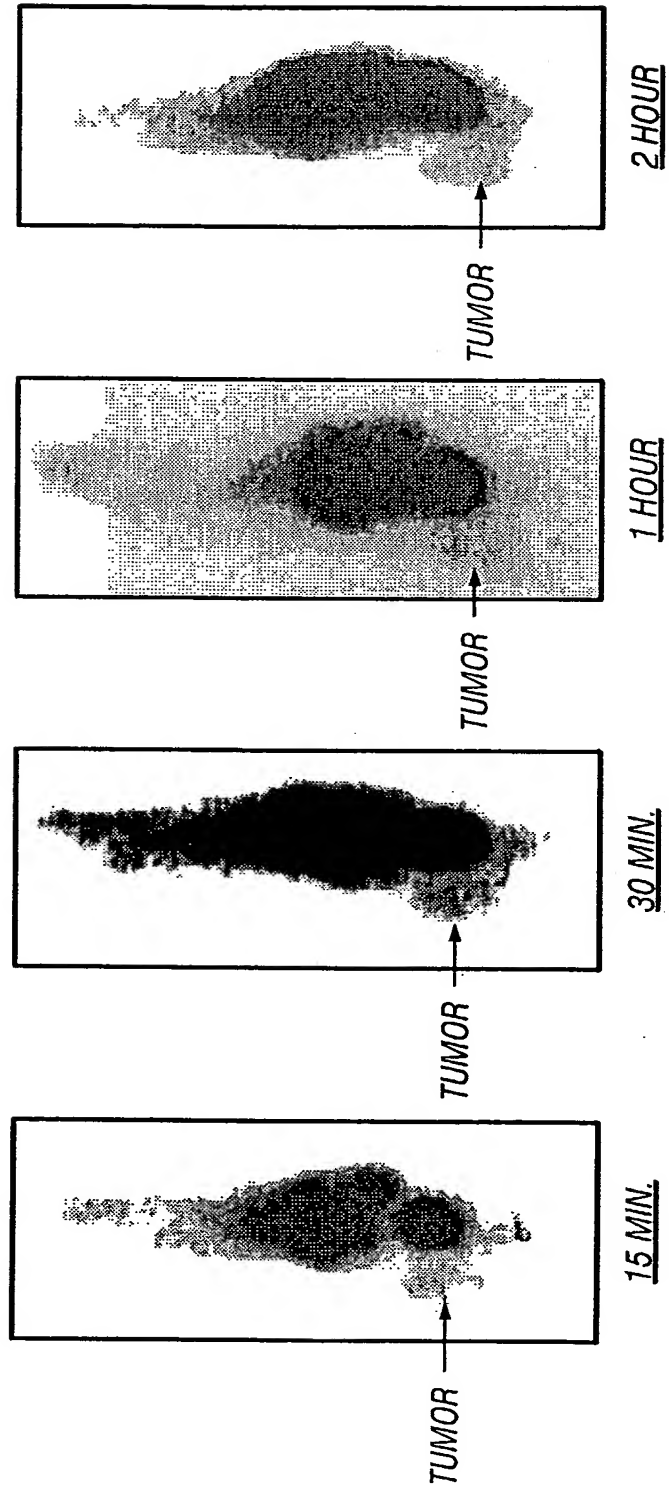


FIG. 20A



**FIG. 20B**

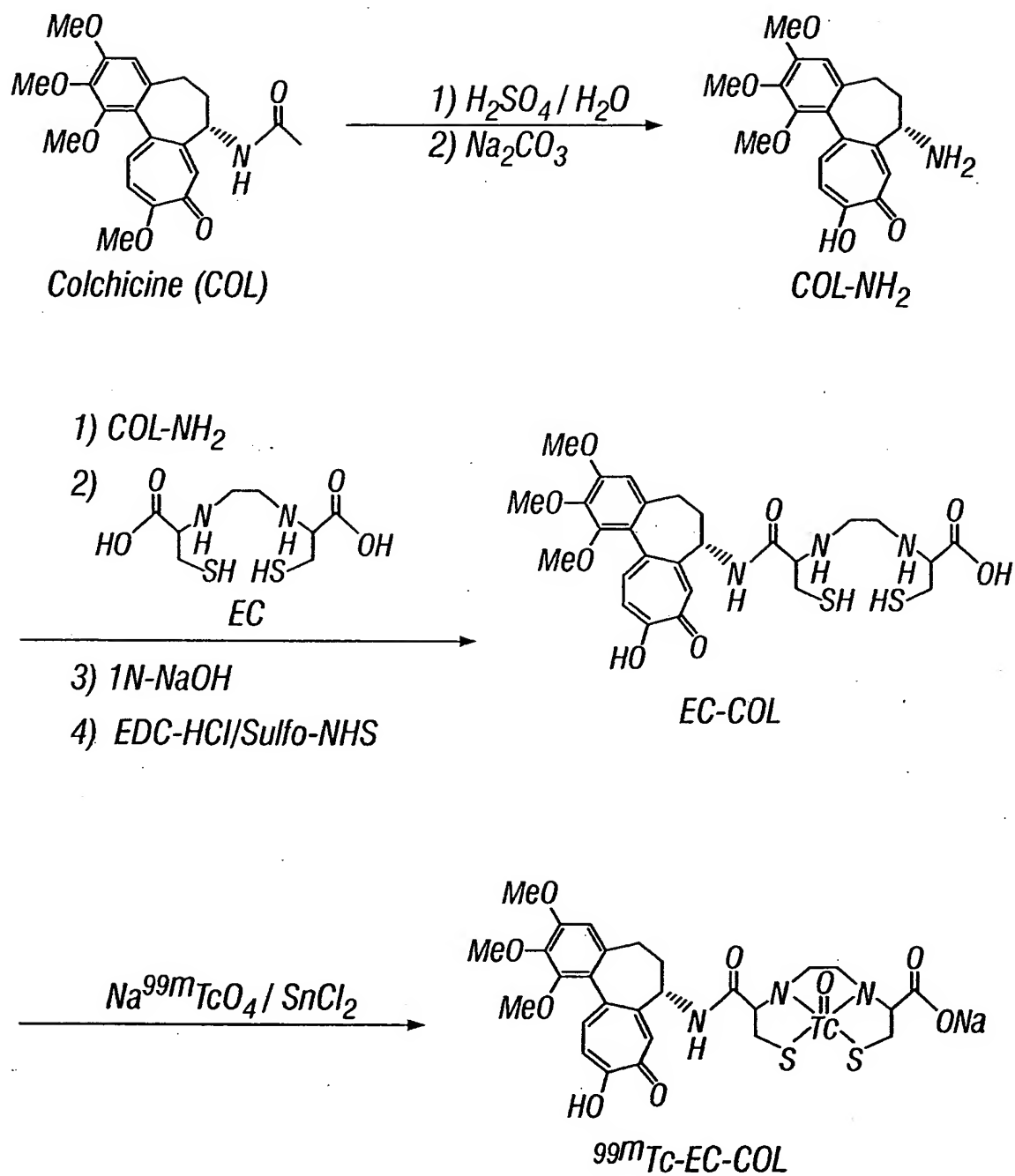


FIG. 21



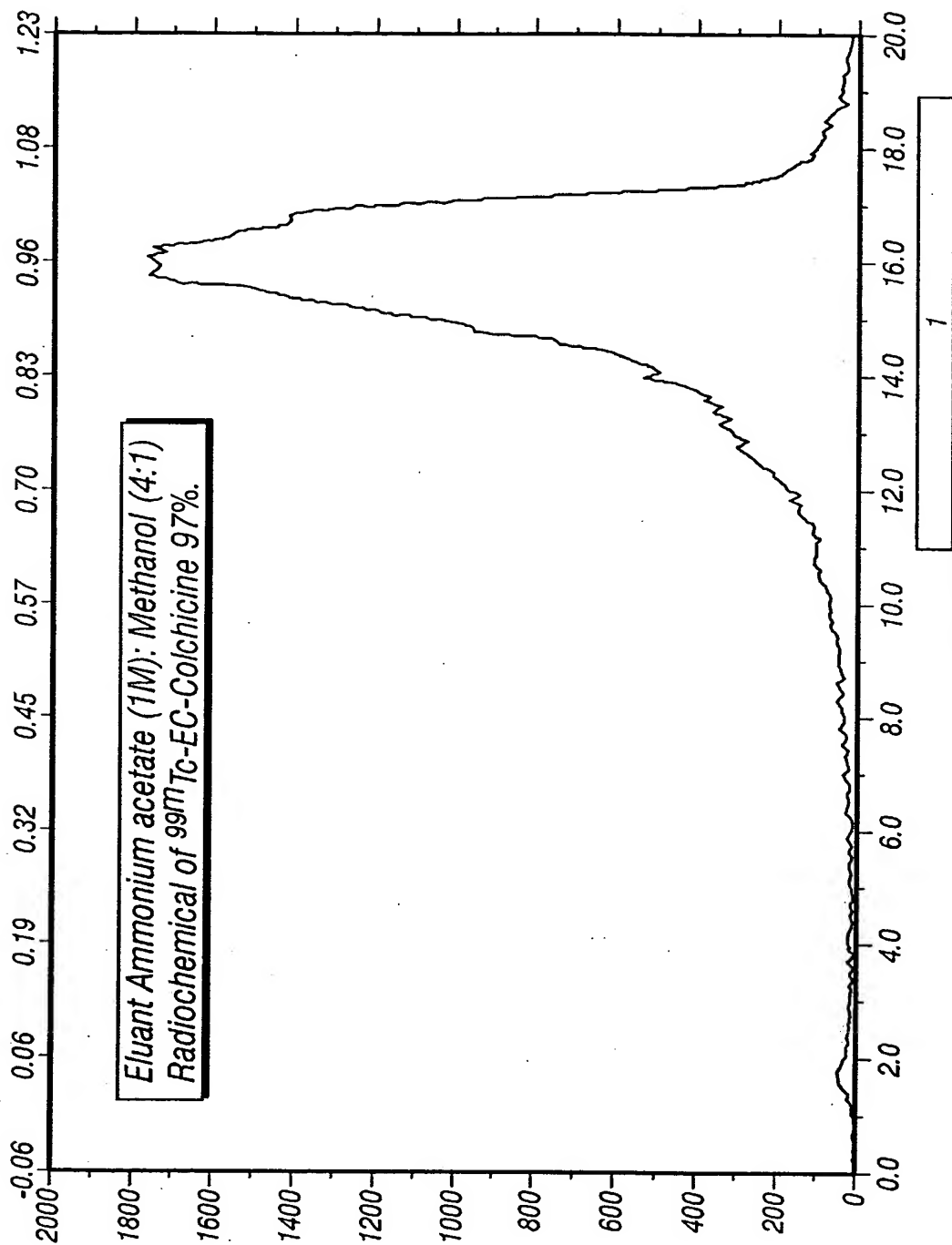


FIG. 22

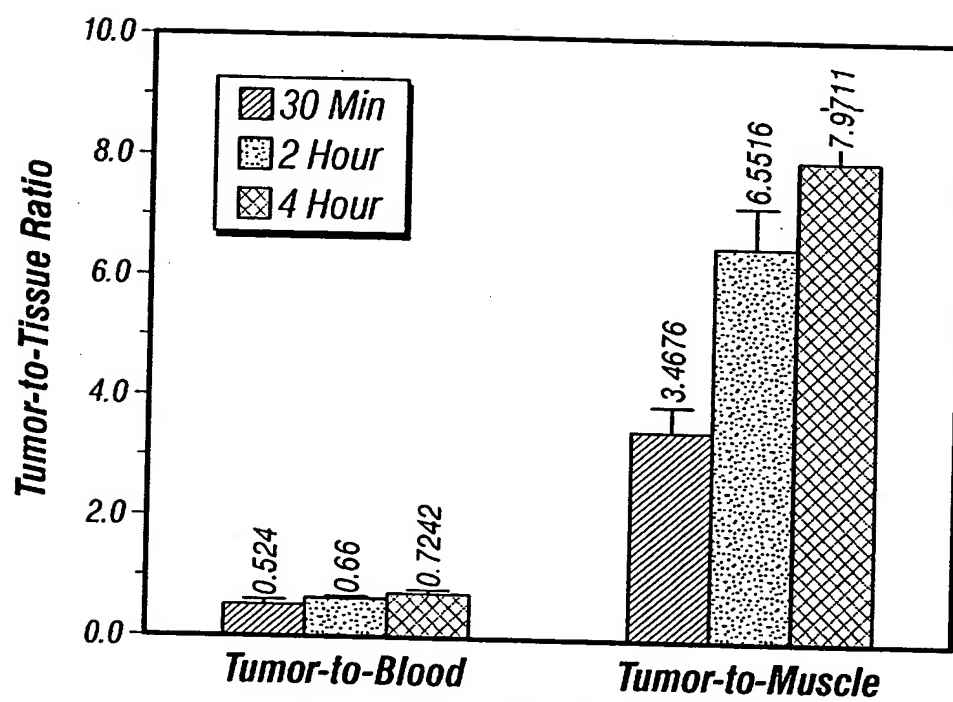


FIG. 23

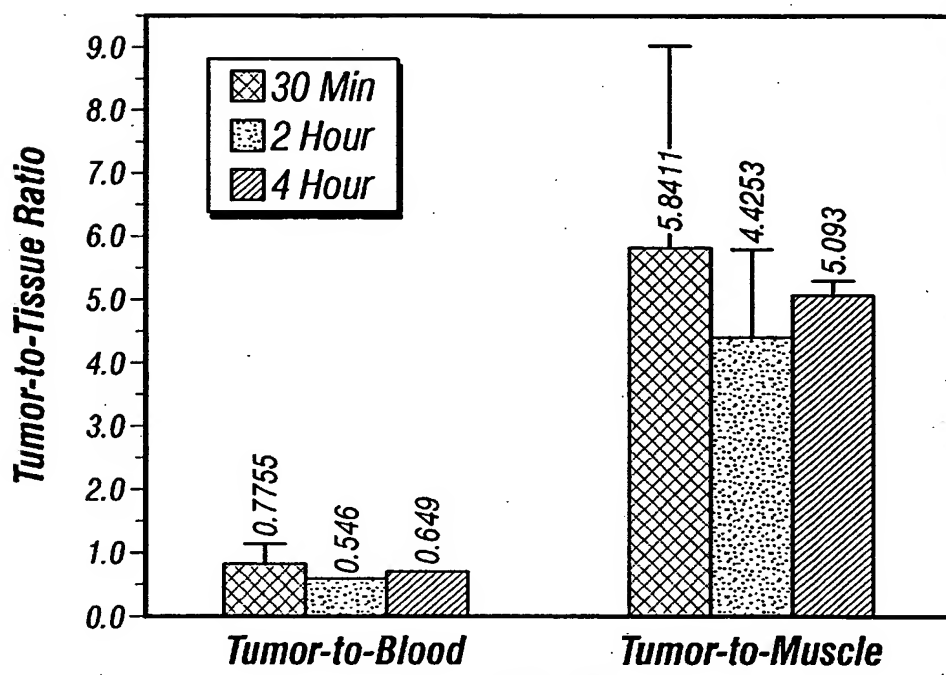
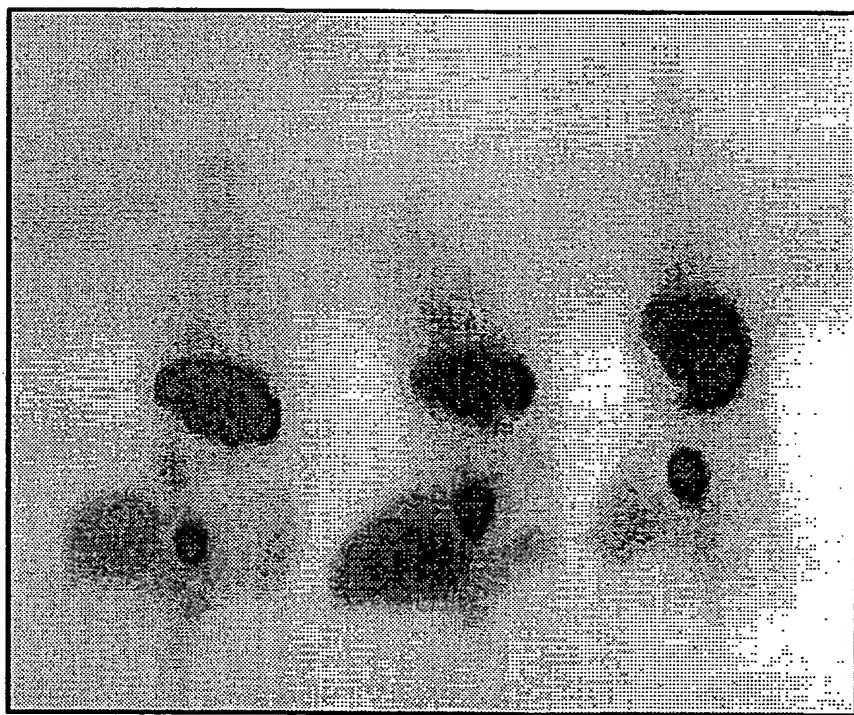
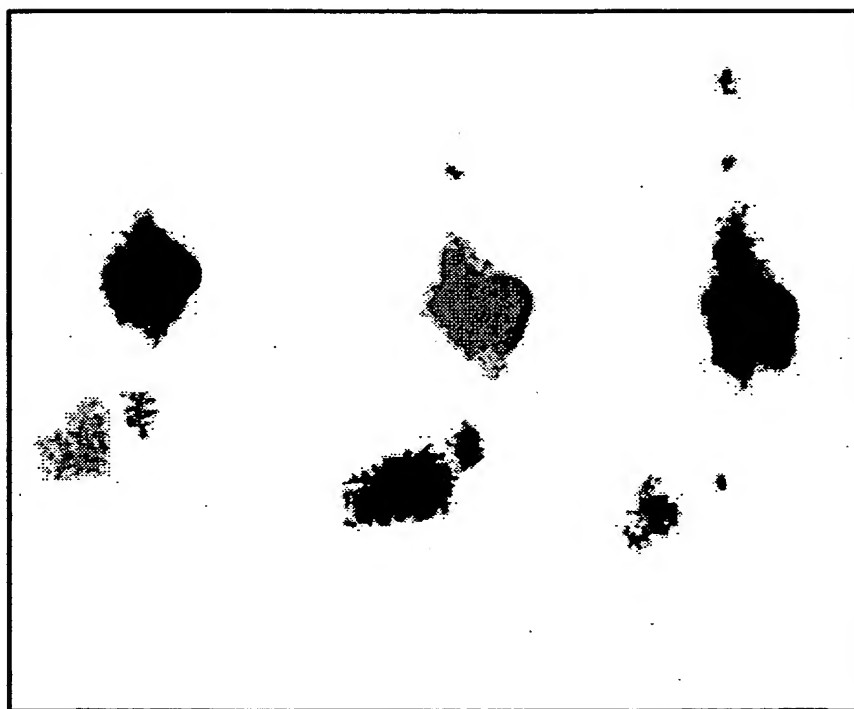


FIG. 24



**FIG. 25**



**FIG. 26**

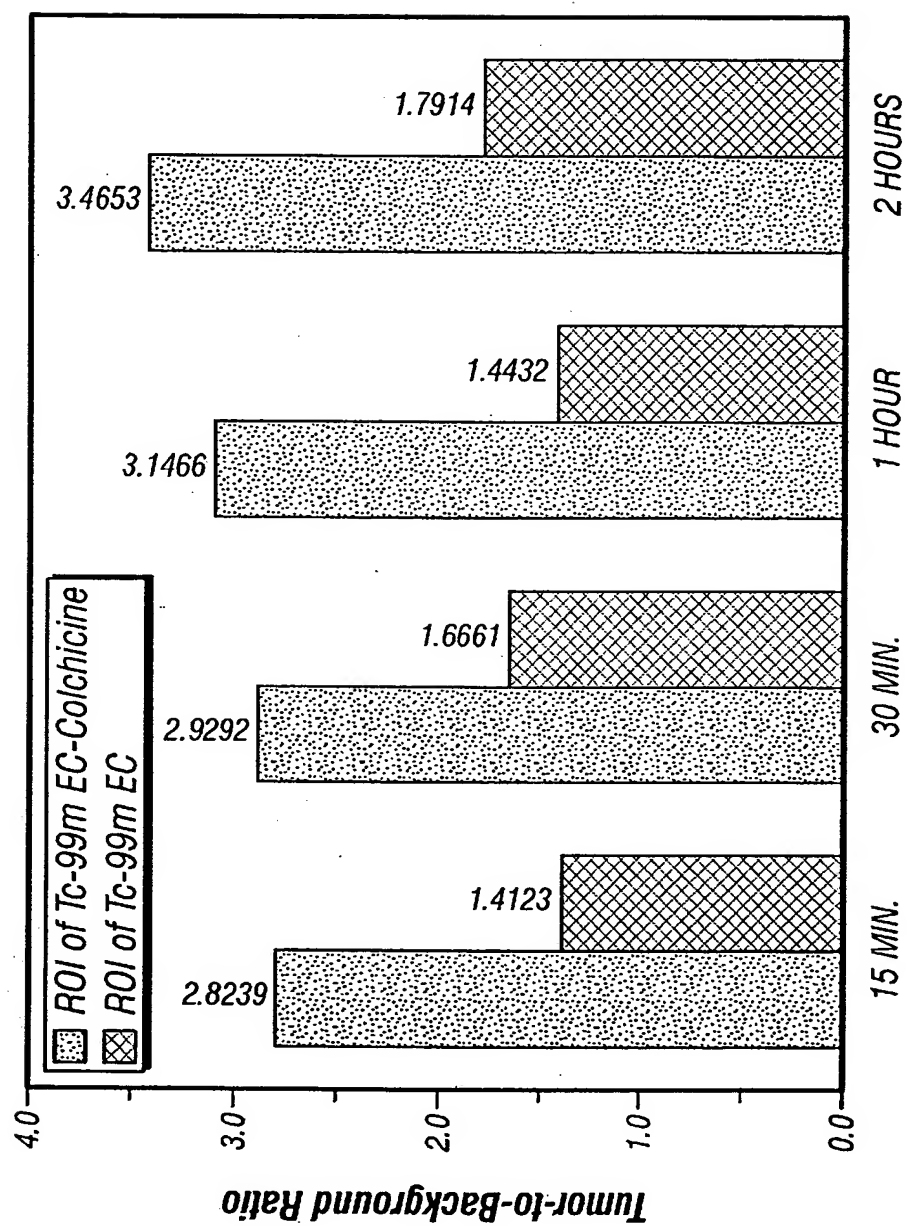
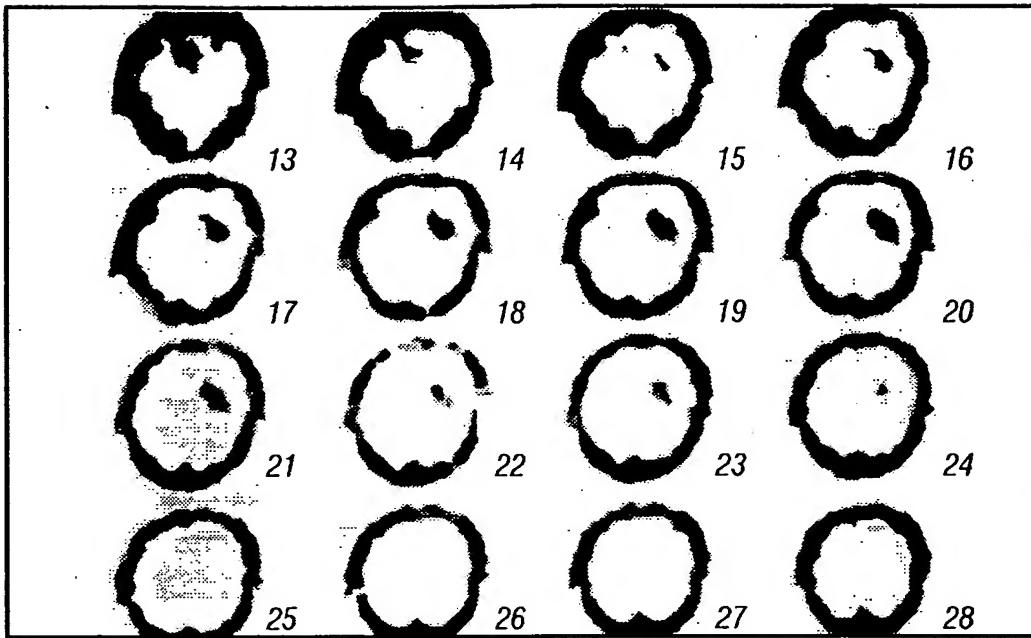


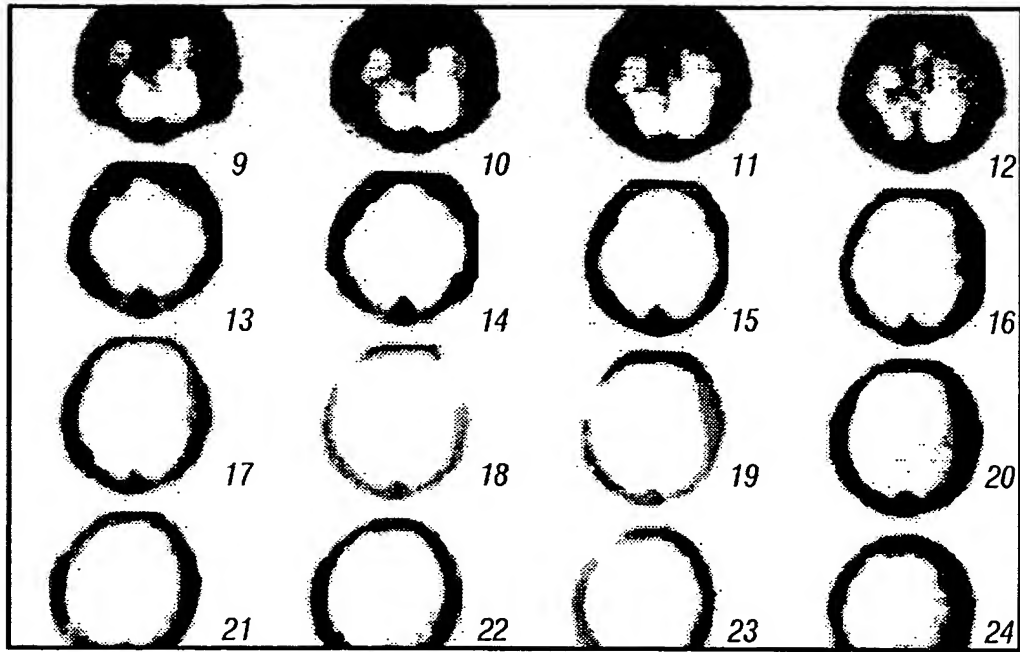
FIG. 27



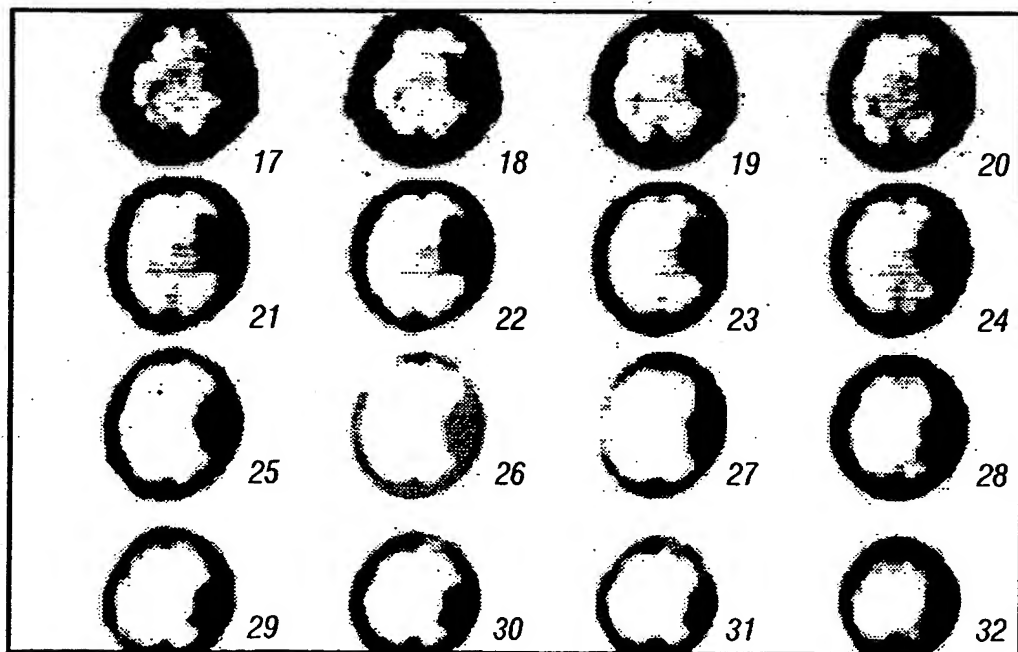
**FIG. 28**



**FIG. 29**



**FIG. 30**



**FIG. 31**



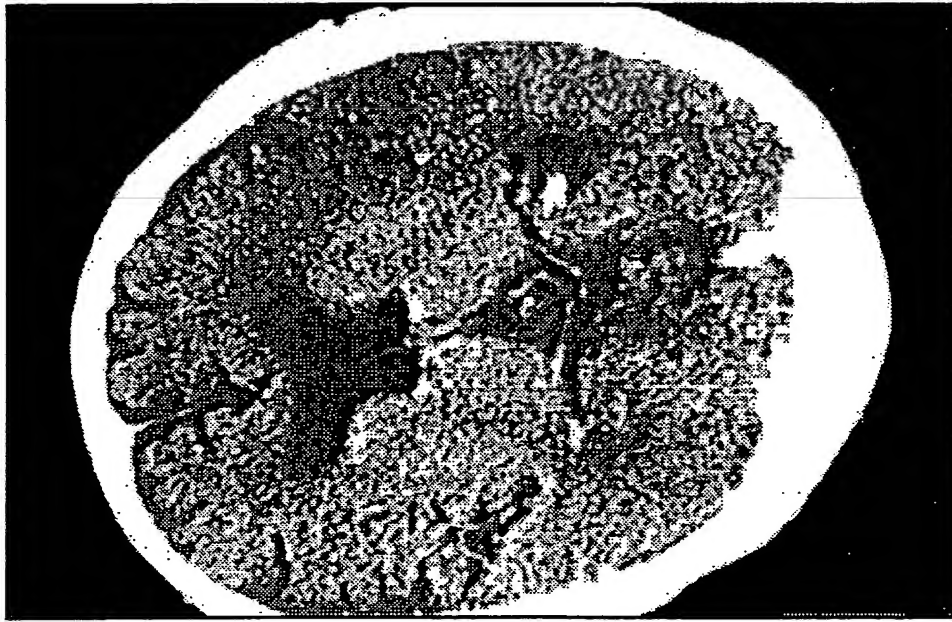


FIG. 32

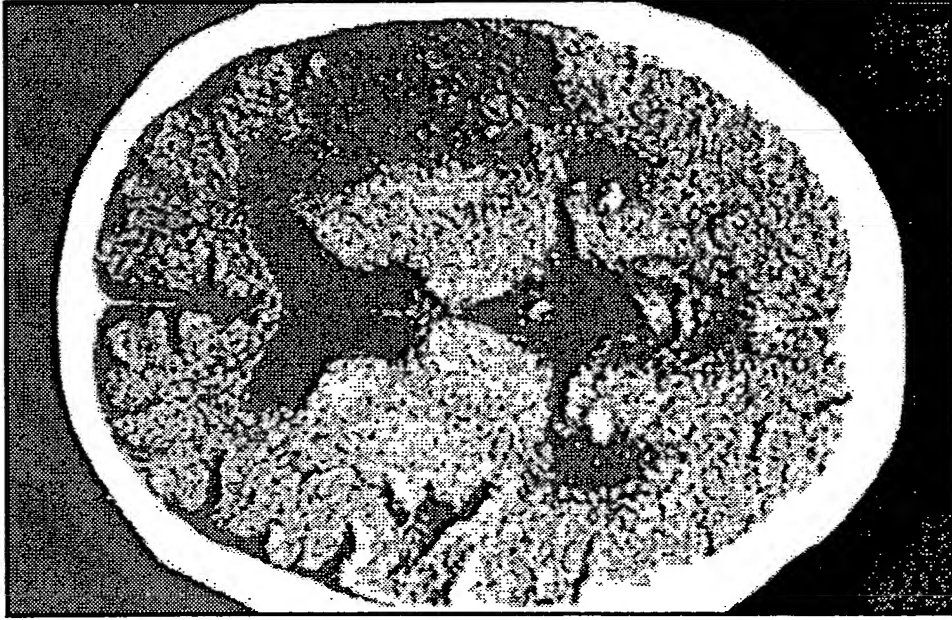
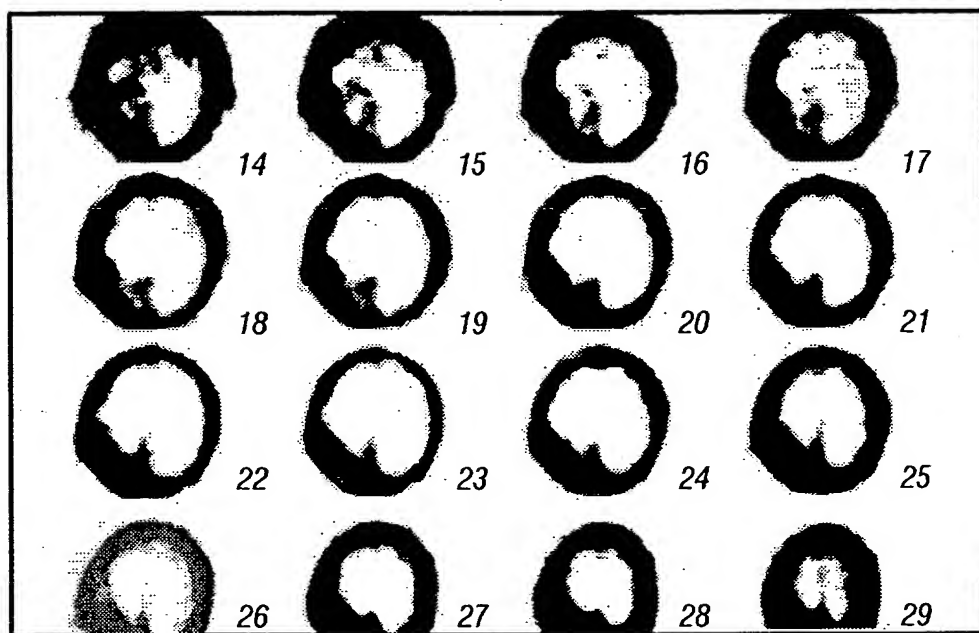
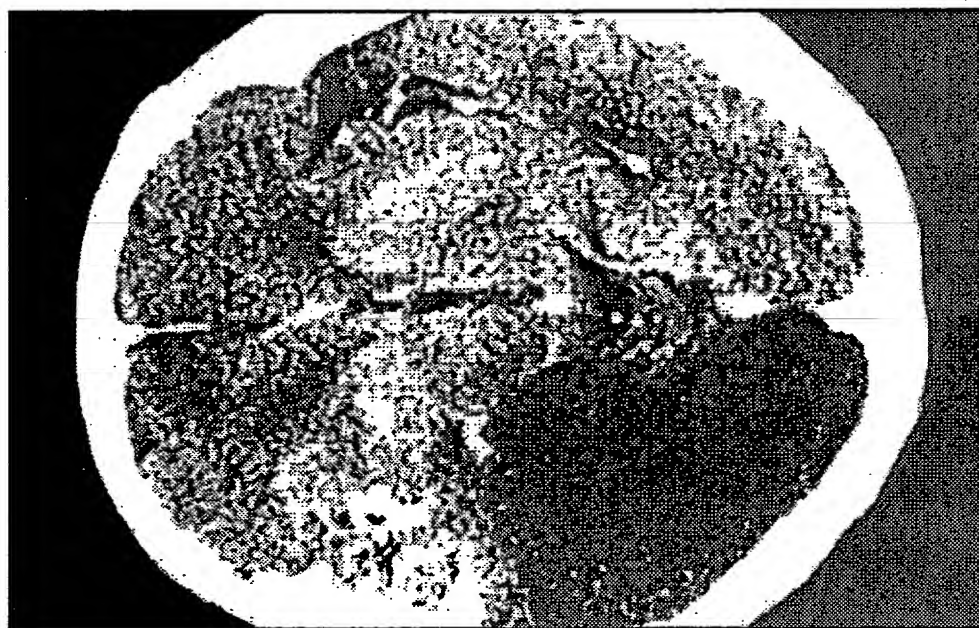


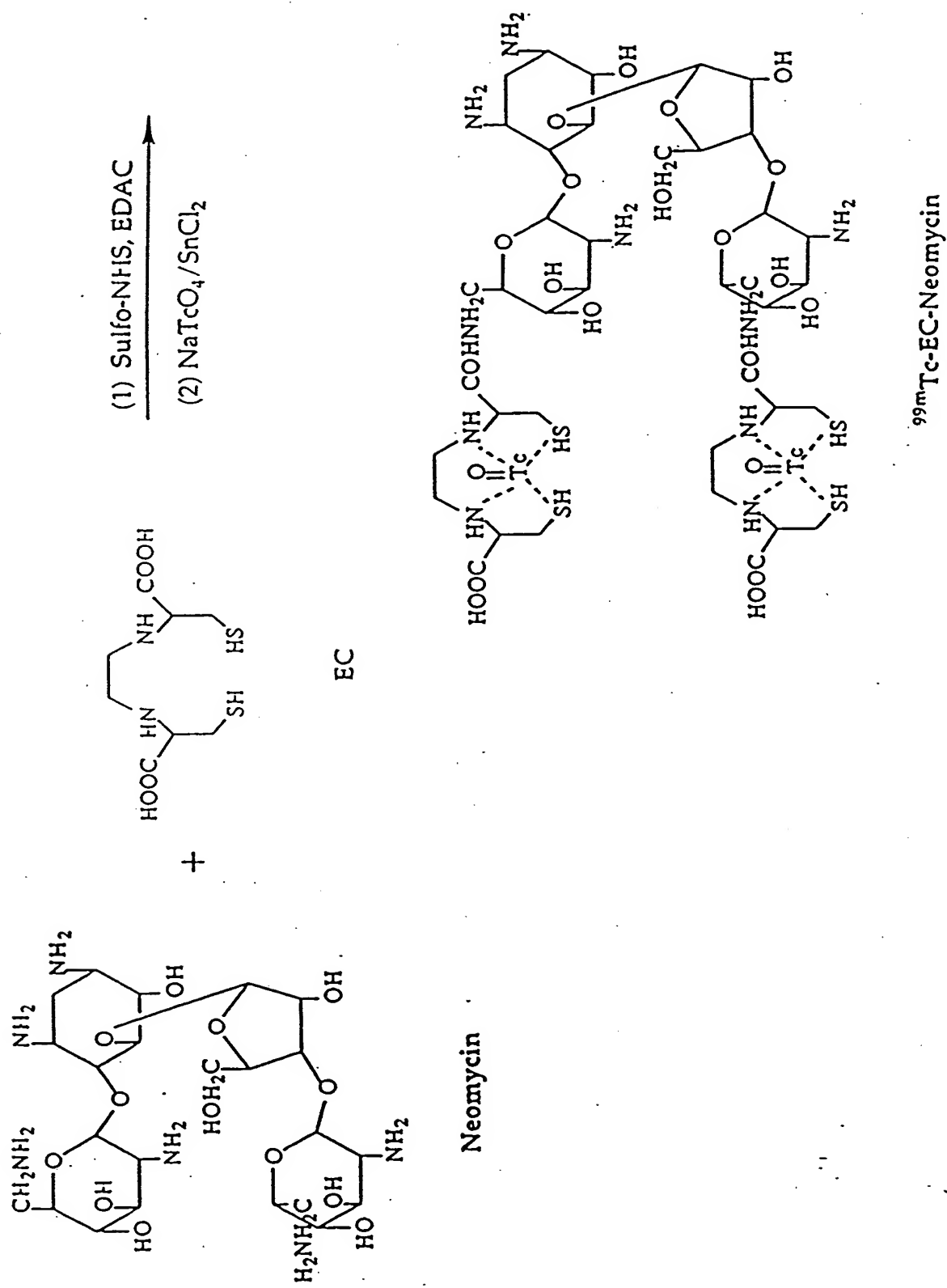
FIG. 33



**FIG. 34**



**FIG. 35**

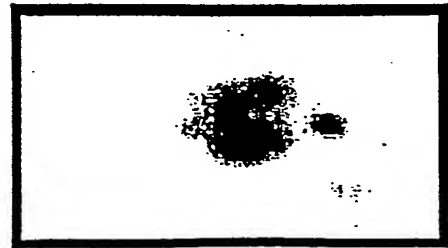


Synthetic scheme of  $^{99\text{m}}\text{Tc-EC-neomycin}$ .

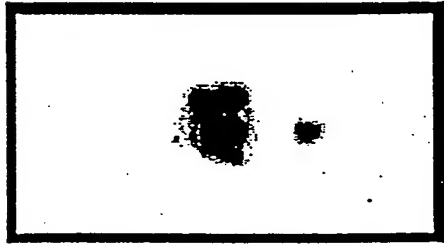
FIG. 36

**$^{99m}\text{Tc-EC}$**

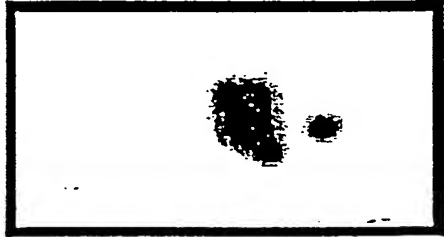
**$^{99m}\text{Tc-EC-Neomycin}$**



0.5



2



4hrs



0.5



2



4hrs

Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Neomycin}$  ( $100\mu\text{Ci/rat, iv.}$ ) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

**FIG. 37A**

Scintigraphic image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Neomycin}$  ( $100\mu\text{Ci/rat, iv.}$ ) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

WOO IN JA 753717-1E63 2000 WONKWANG UNIV HOSP  
SCINTIMAMMOGRAPHY EC-NEO

LT LAT-2H

RT LAT-2H

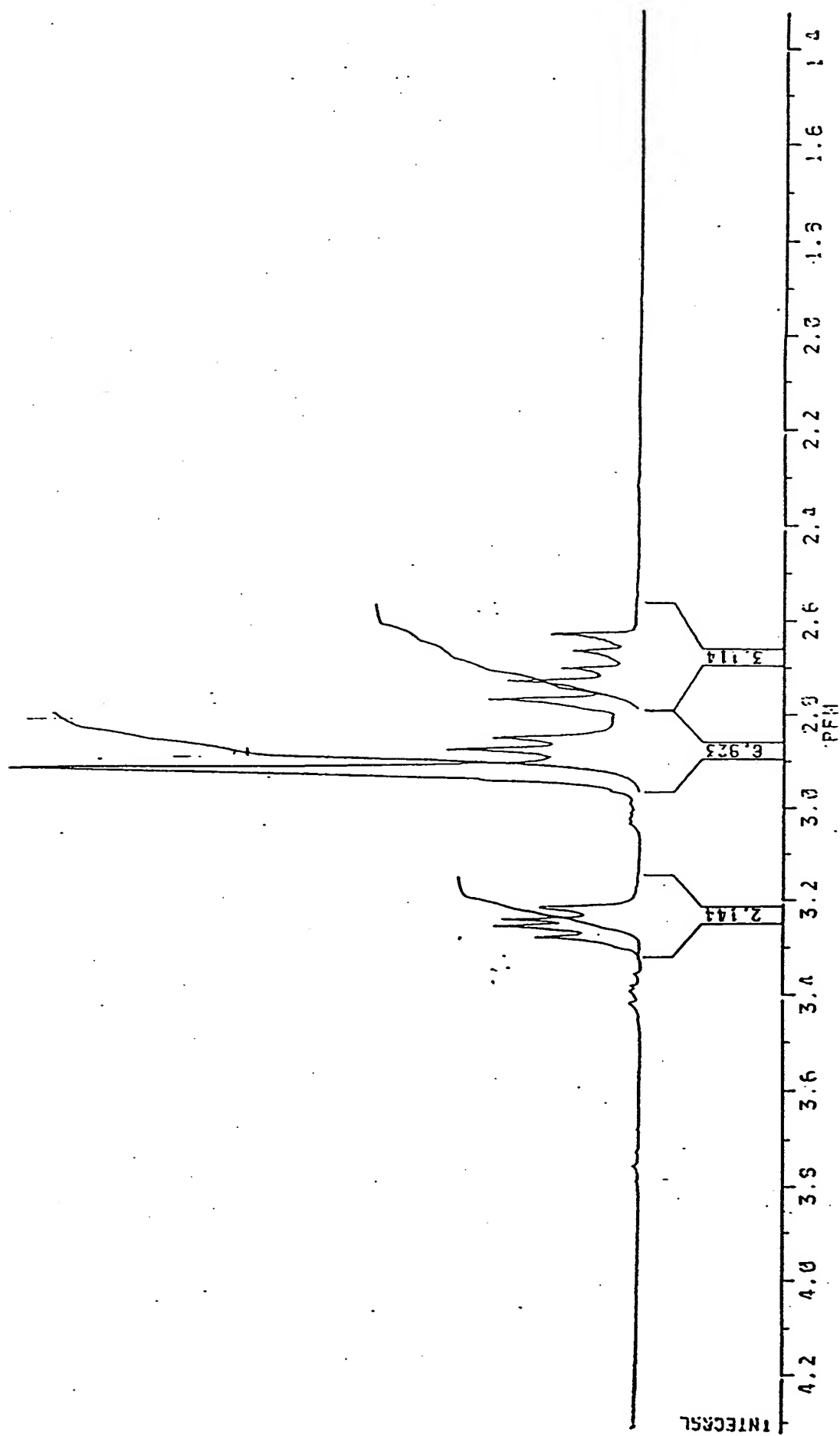
LT LAT-2H

RT LAT-2H

FIG. 37B

Scintimammography with  $^{99m}\text{Tc}$ -EC- neomycin (30 mCi, iv.) of a breast cancer patient. Images taken two hours post-injection.

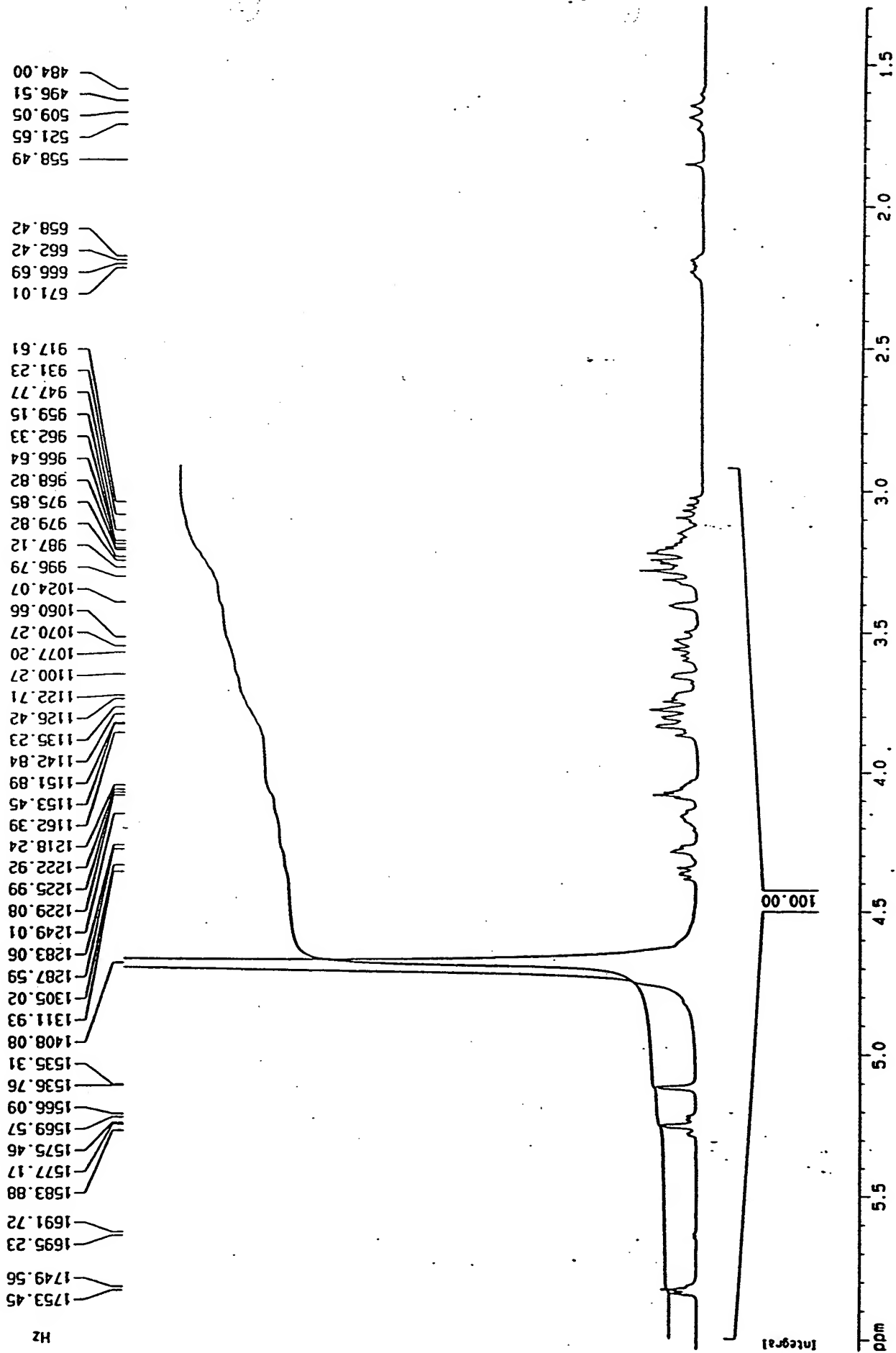
EC.



<sup>1</sup>H-NMR of EC.

FIG. 38A

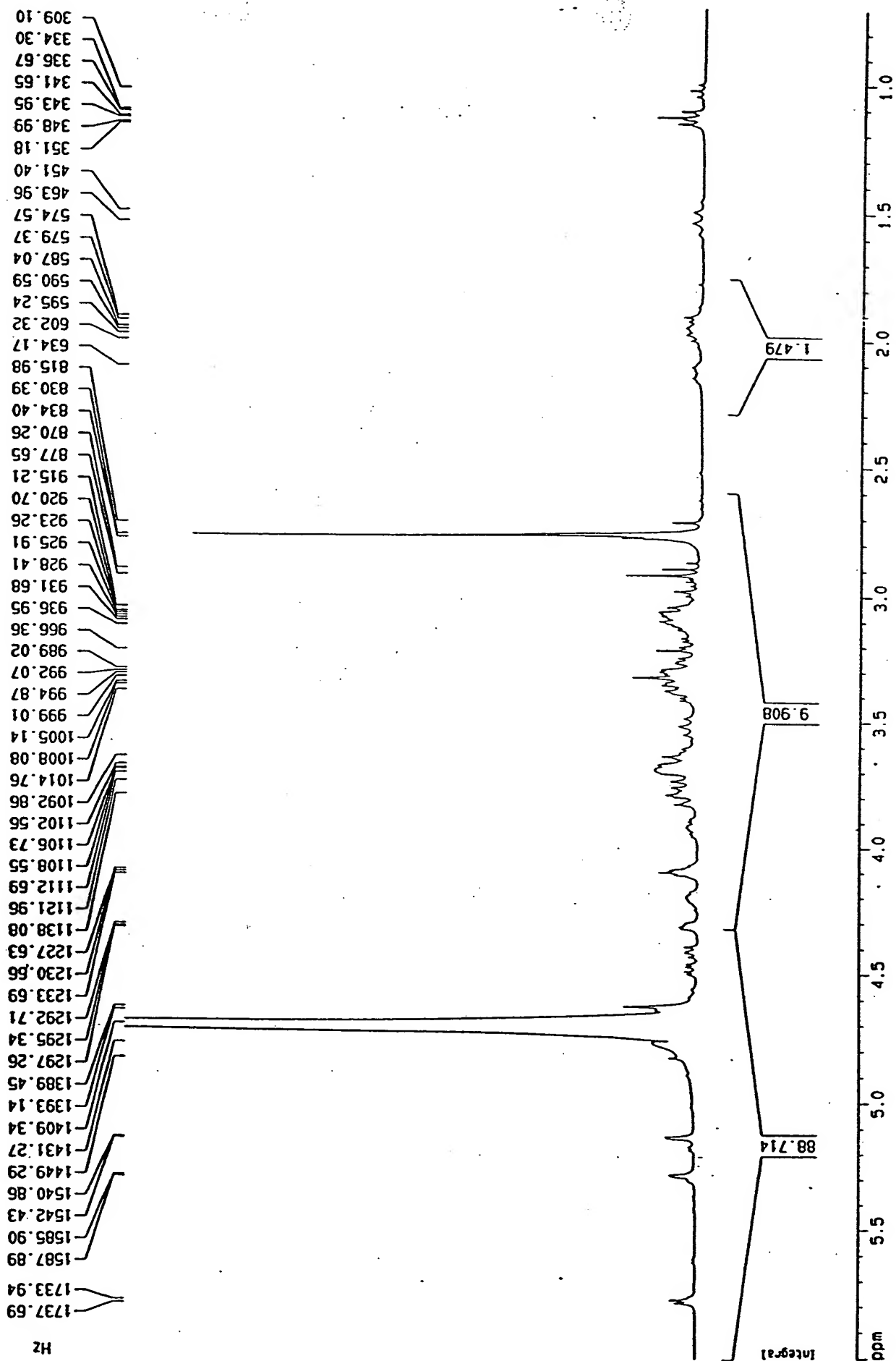
Neomycin



<sup>1</sup>H-NMR of neomycin.

FIG. 38B

EC-Neomycin

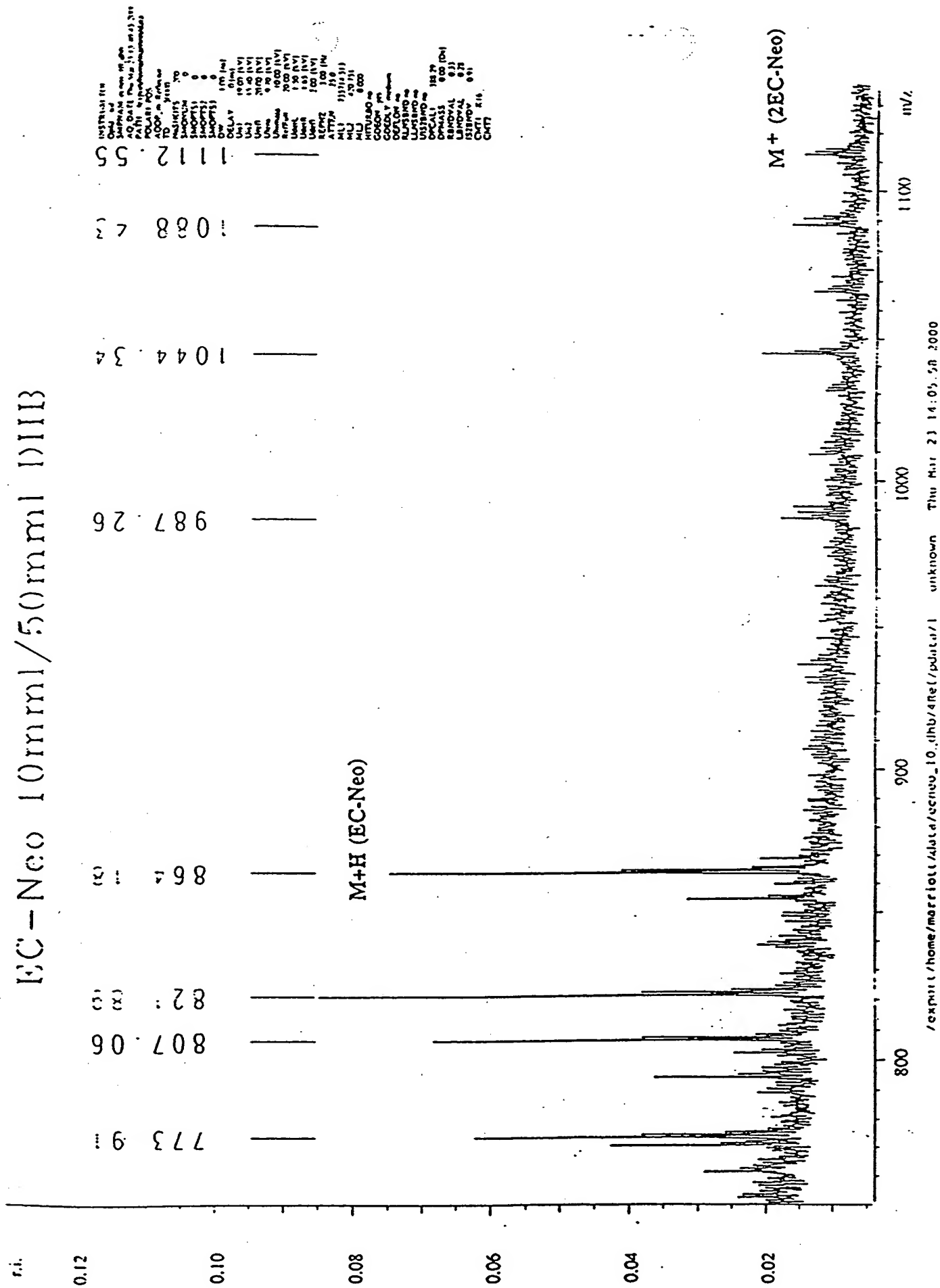


<sup>1</sup>H-NMR of EC-neomycin.

FIG. 38C



## PC-Neo 10mm/50mm 1113



**FIG. 10**  
Mass spectrometry of EC-neomycin ( $M^+ 112.55$ ).

## UV Wavelength Scan of EC

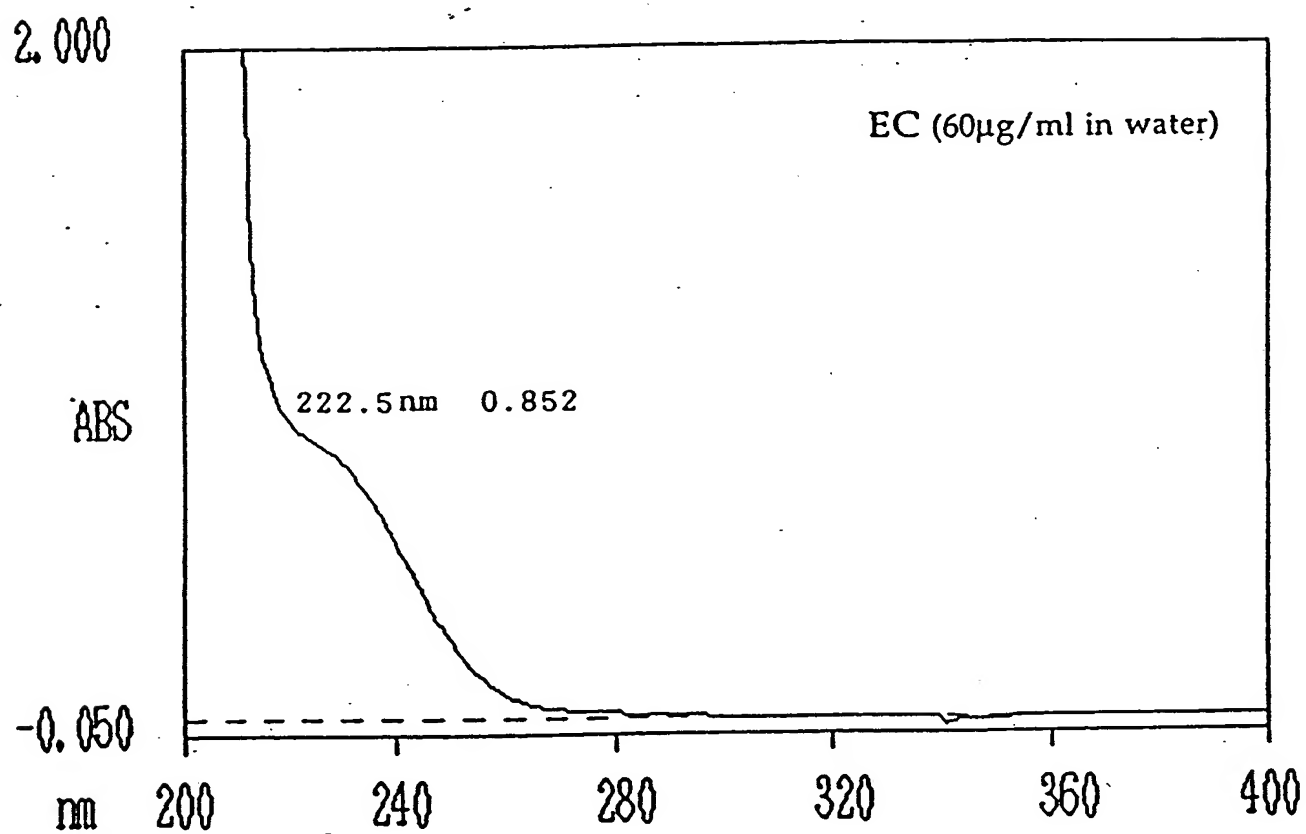


FIG. 40A

UV wavelength scan of EC.

## UV Wavelength Scan of Neomycin

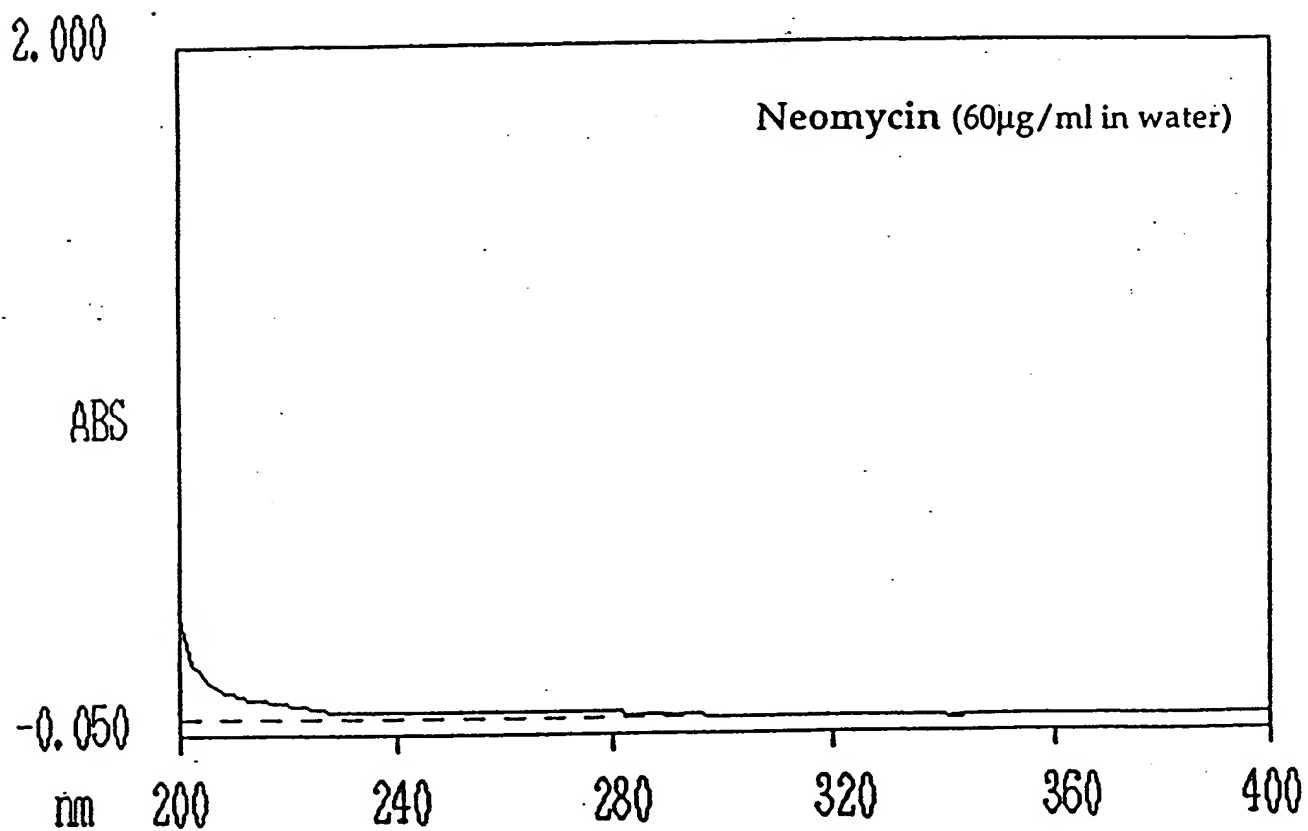


FIG. 40B

UV wavelength scan of neomycin.

## UV Wavelength Scan of EC-Neomycin

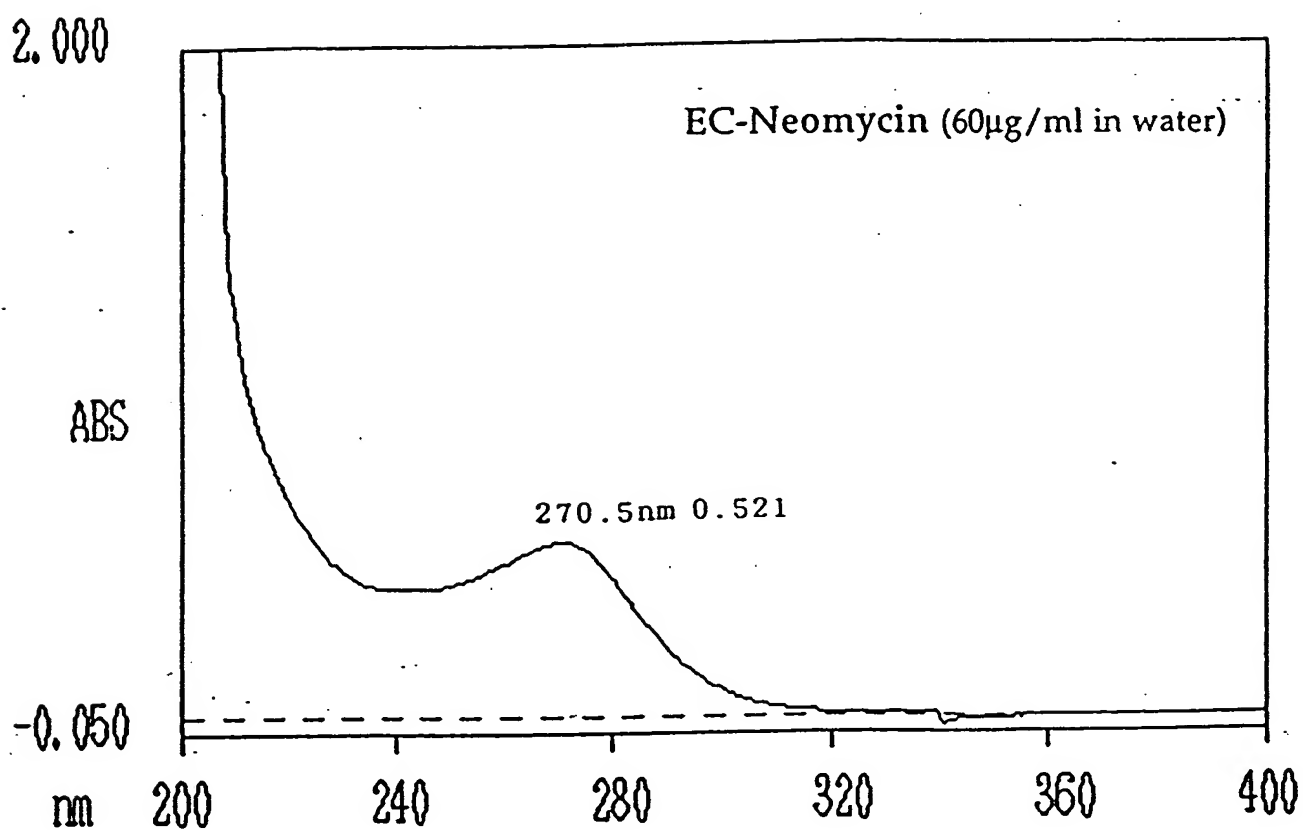


FIG. 40C

UV wavelength scan of EC-neomycin.

# SUMMARY REPORT

EC-NEOMYCIN 30mg + EC

Tc-99m

METHANOL-AMMONIUM ACETATE

Date: Feb 03 2000

Start time: 12:45

Accum time: 00:03:01

Data File:

Plate: 1 Lane: 1

Elect Resolution: NORMAL

(Amp. Range: 0 - 2047)

Rf Calculations: Origin: 0.00 cm

Solvent Front: 20.00 cm

Integration Parameters: Auto Integration

Peak slope: 1.0

Min width: 0.1

Min %: 2.0

Total Count Region: 0.00cm to 20.00cm

Total Counts: 48360

Total CPM: 16030

Reg. #	Start (cm)	Stop (cm)	Center (cm)	Rf	Region Counts	Region CPM	% of Tot Reg	% of Tot Cnt
1	6.50	14.90	10.57	0.53	45000	14920	100.00	93.05
TOTAL					45000	14920	100.00	93.05

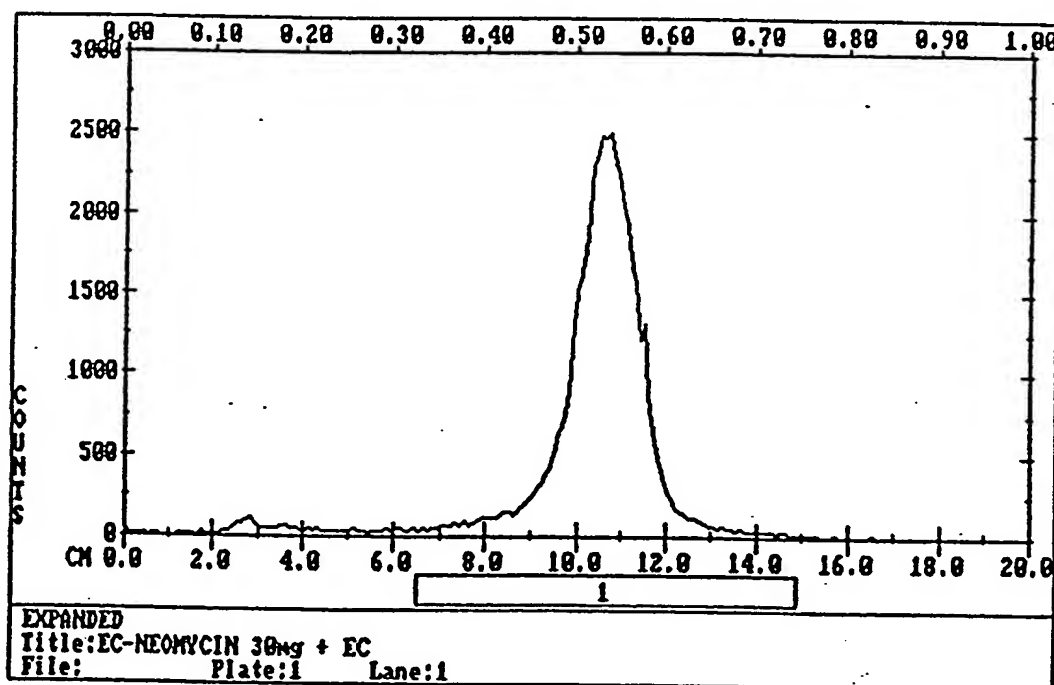


FIG. 41

Radio-TLC analysis of <sup>99m</sup>Tc-EC-neomycin.

# <sup>99m</sup>Tc-EC-NEO

Column: Bio-Rad Carbohydrate, Aminex HPX-87C, 250x4mm

Eluent: H<sub>2</sub>O

Flow Rate: 0.4ml/min

Detector: Radiochemical

Temp: 85.0°C

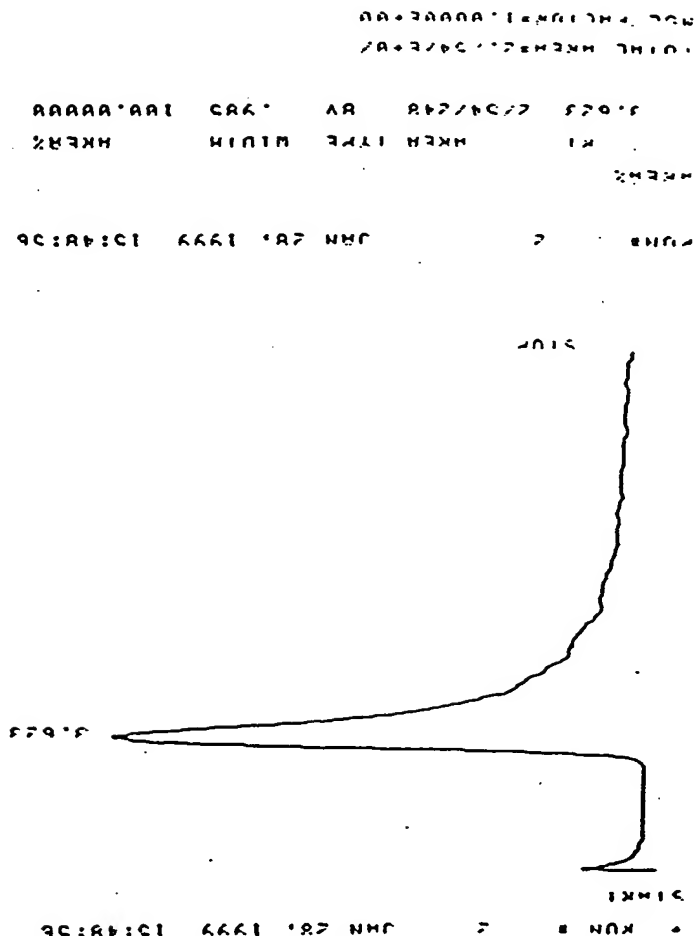


FIG. 42 HPLC analysis of <sup>99m</sup>Tc-EC-neomycin (radioactive detector).



<sup>18</sup>F-FDG

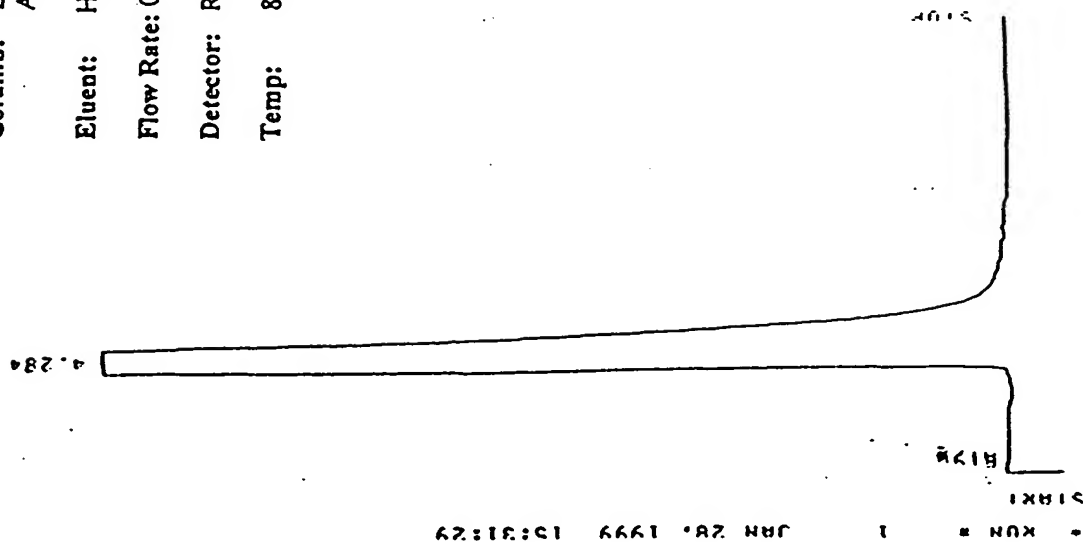
Column: Bio-Rad Carbohydrate,  
Aminex HPX-87C, 250x4mm

Eluent: H<sub>2</sub>O

Flow Rate: 0.4ml/min

Detector: Radiochemical

Temp: 85.0°C



62:13:01 6661 182 NHC

6661 182 NHC  
6661 182 NHC  
6661 182 NHC  
6661 182 NHC  
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6661 182 NHC  
6661 182 NHC  
6661 182 NHC  
6661 182 NHC  
6661 182 NHC

HPLC analysis of <sup>18</sup>F-FDG (radioactive detector).

FIG. 44



# <sup>18</sup>F-FDG

Column: Bio-Rad Carbohydrate,  
Aminex HPX-87C, 250x4mm

Eluent: H<sub>2</sub>O

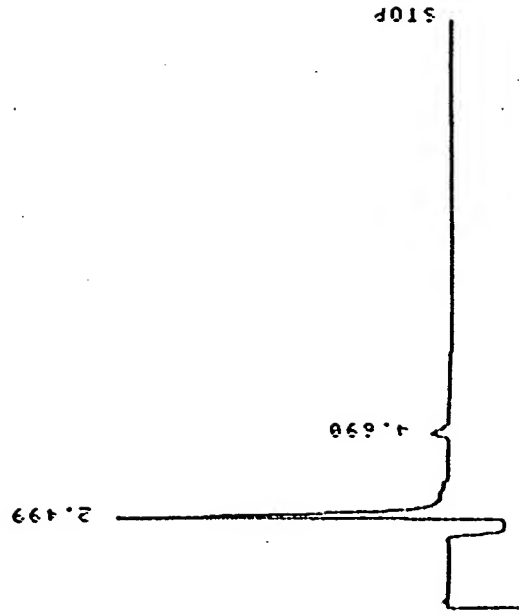
Flow Rate: 0.4ml/min

Detector: UV, 254nm

Temp: 85.0°C

RUN# 1 JAN 28, 1999 08:37:02

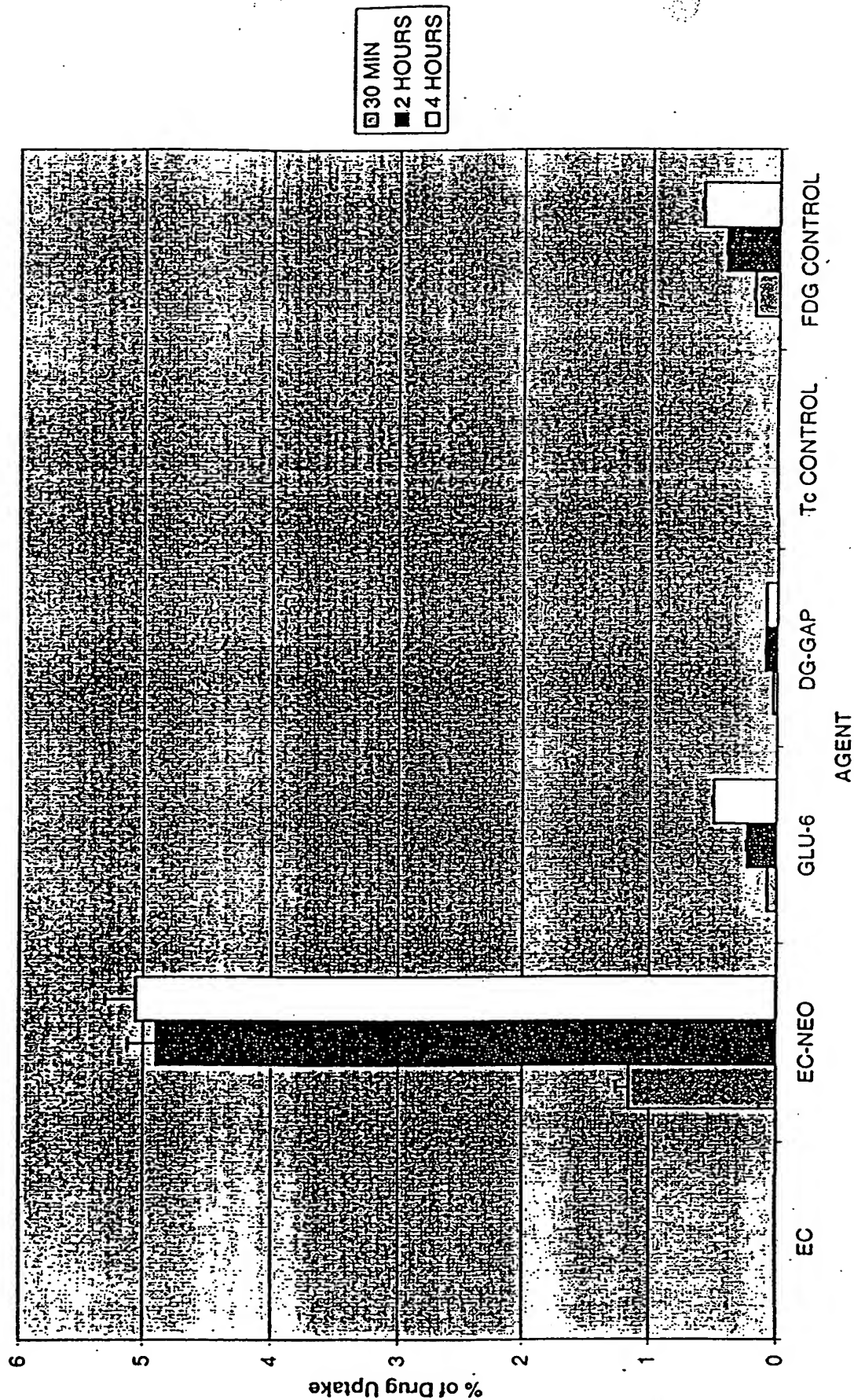
RUN# 1 JAN 28, 1999 08:37:02



DATE 1/28/99  
JAN 28, 1999 08:16:15  
• CH1 SP 1.5 0  
• AT1 2 0  
• THRESH 2 0  
• LIST: LIST  
PEAK CAPACITY: 1244  
ZERO = 0. -11.179  
AT1 2 = 3  
CH1 SP = 0.5  
NR REJ = 0  
THRESH = 2  
FW NO = 0.01

FIG. 45 HPLC analysis of <sup>18</sup>F-FDG (UV 254 nm).

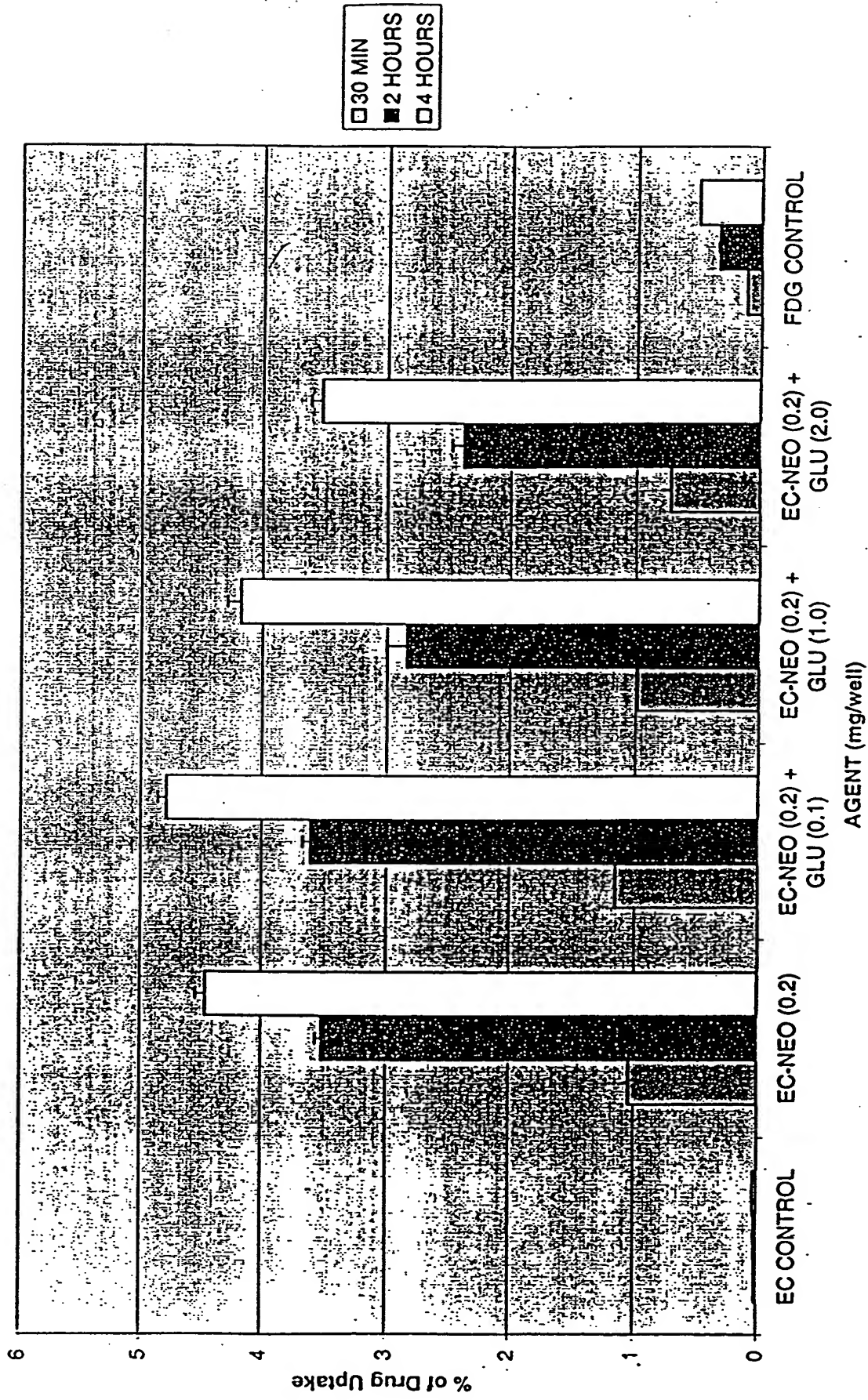
# % of Drug Uptake in Lung Cancer Cell Line (A549)



In vitro cellular uptake assay of a series of  $^{99m}\text{Tc}$ -EC-drug conjugates in lung cancer cell line.  $^{99m}\text{Tc}$ -EC- neomycin showed

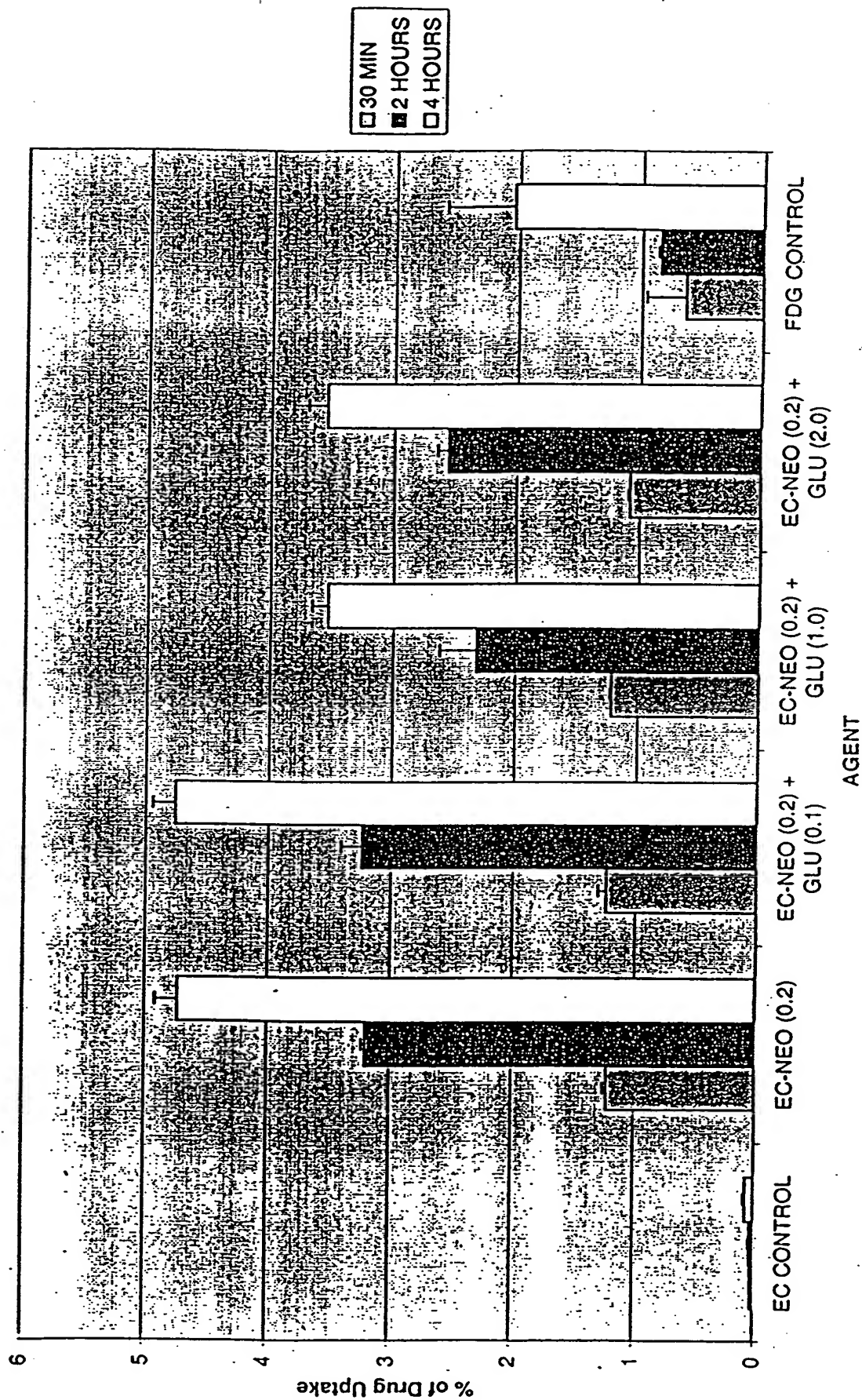
FIG. 46

# % of Drug Uptake in Human Lung Cancer Cell Line (A549)



Effect of glucose on cellular (A549) uptake of  $^{99m}\text{Tc}$ -EC- neomycin and  $^{18}\text{F}$ -FDG.

# % of Drug Uptake in Human Lung Cancer Cell Line (H1299)

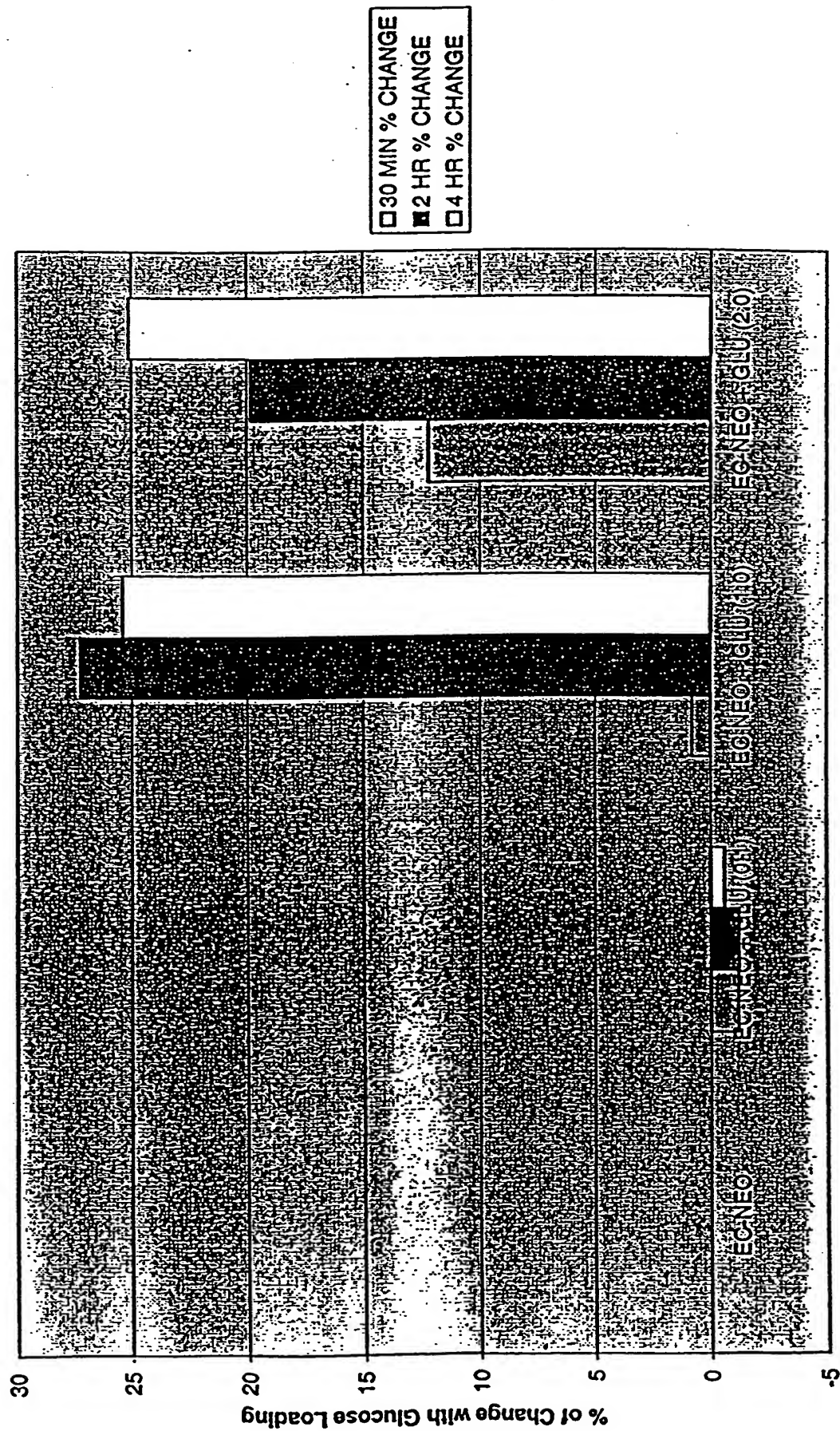


Effect of glucose on cellular (H1299) uptake of  $^{99m}\text{Tc}$ -EC-

FIG. 48A



# Effects of Glucose Loading on <sup>99m</sup>Tc-EC-Neomycin in Human Lung Cancer Cell Line (H1299)



AGENT (dose)

FIG. 48B

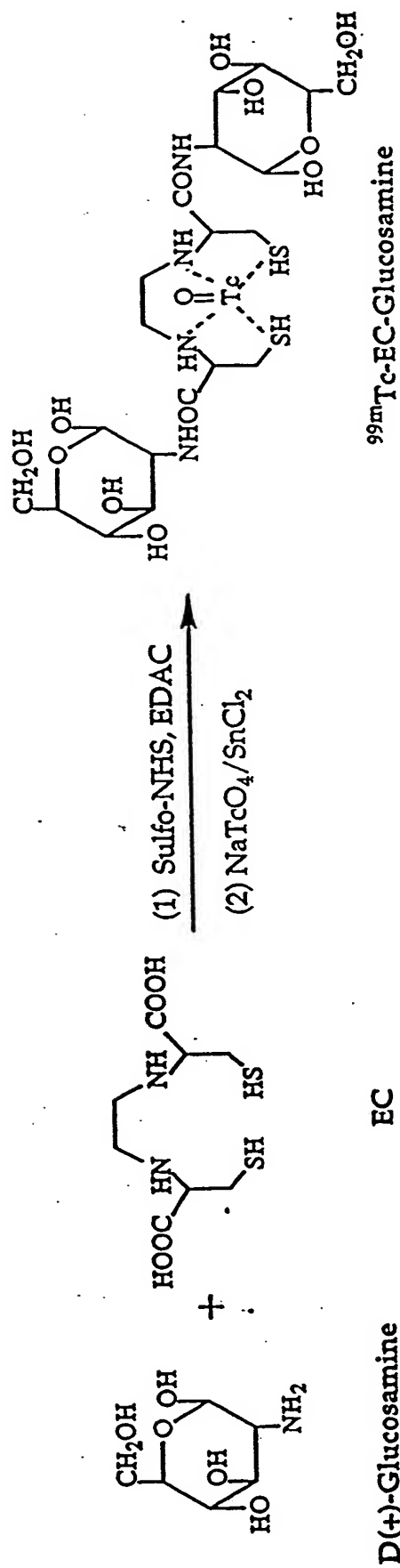
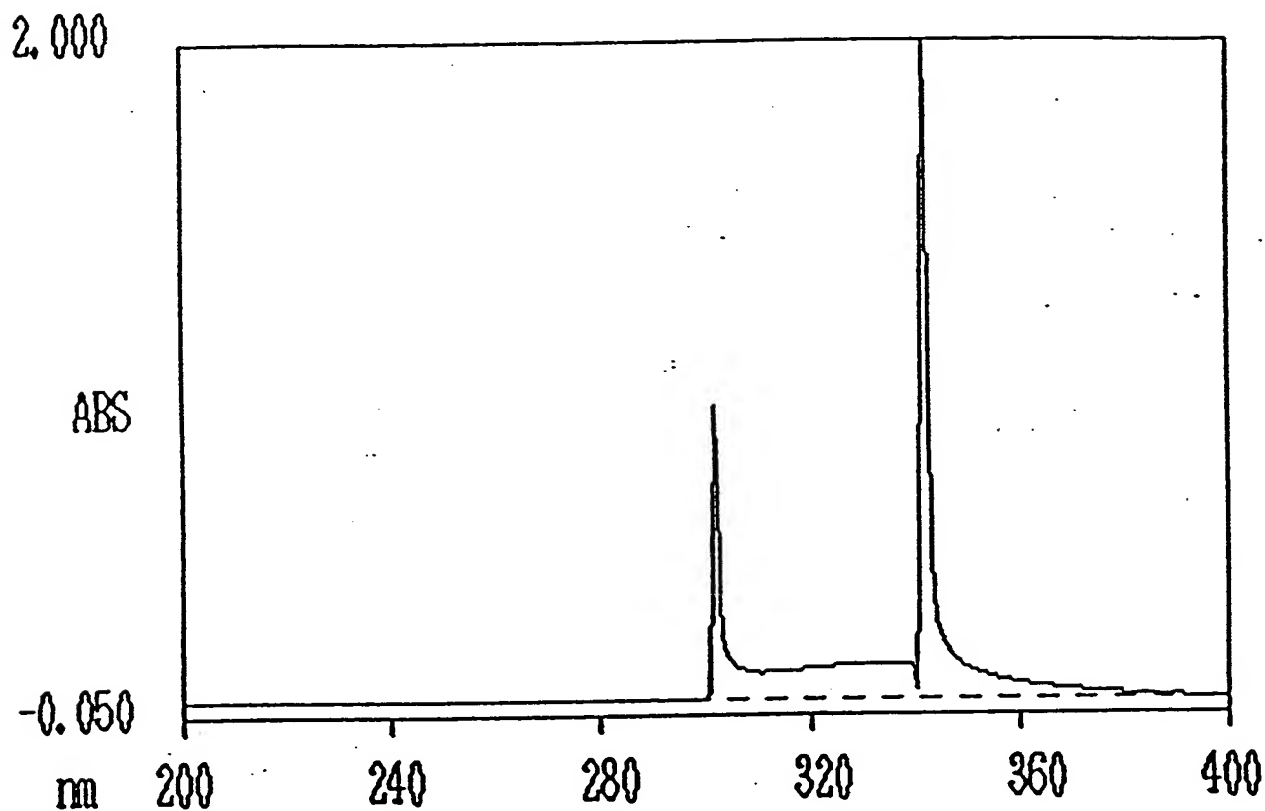


FIG. 49      Synthesis of  $^{99\text{m}}\text{Tc-EC-Glucosamine}$

# Hexokinase Assay of Glucose

WAVELENGTH SCAN/0

03/01/00 14:41



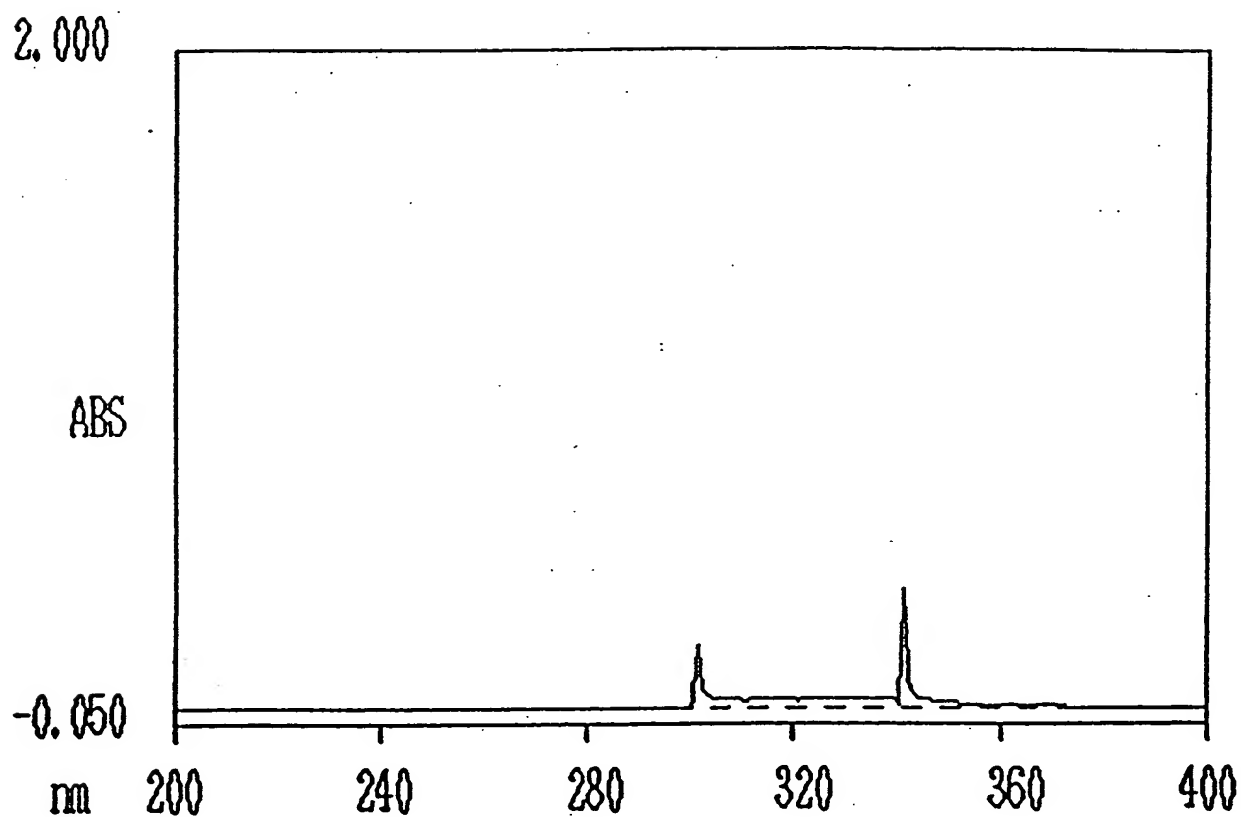
301.5 nm 0.889 ABS  
342.0 nm 2.044 ABS

FIG. 50

# Hexokinase Assay of Glucosamine

WAVELENGTH SCAN/0

03/01/00 14:50



301.5 nm 0.193 ABS  
341.5 nm 0.360 ABS

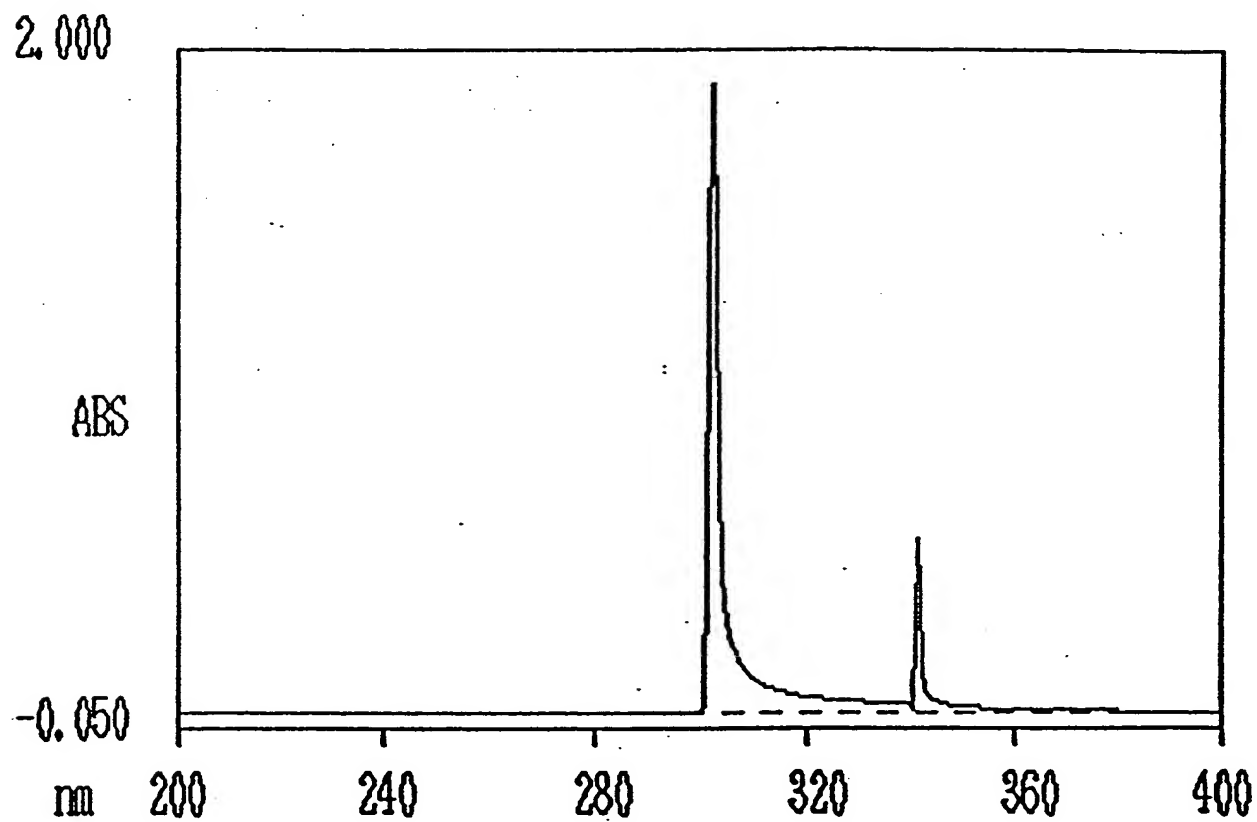
FIG. 51



## Hexokinase Assay of EC-Glucosamine

WAVELENGTH SCAN/0

03/01/00 14:45



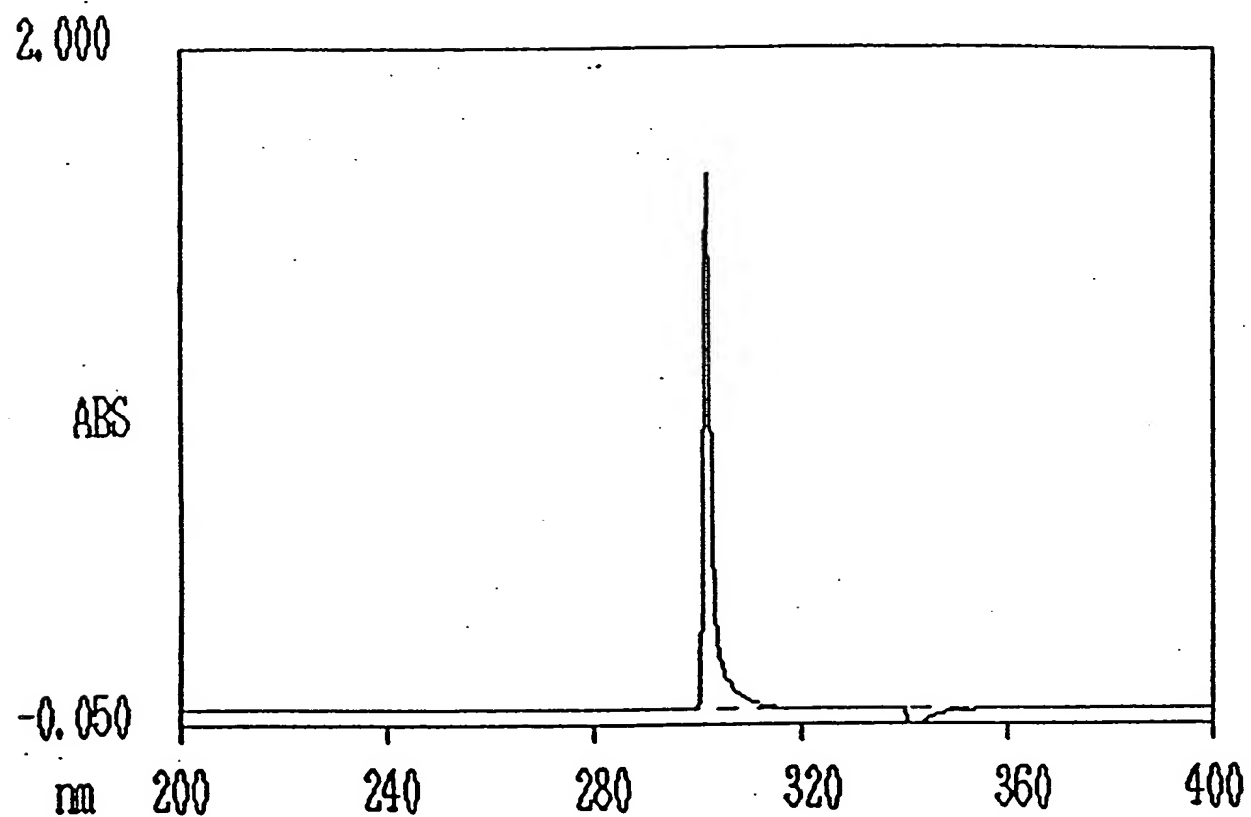
302.5 nm 1.897 ABS  
341.5 nm 0.523 ABS

FIG. 52

# Hexokinase Assay of EC-GAP-Glucosamine

WAVELENGTH SCAN/0

03/01/00 15:37



302.0 nm 1.620 ABS

FIG. 53



# In Vitro Cellular Uptake of $^{99m}\text{Tc}$ -EC in Human Lung Cancer Cell Line (A549)

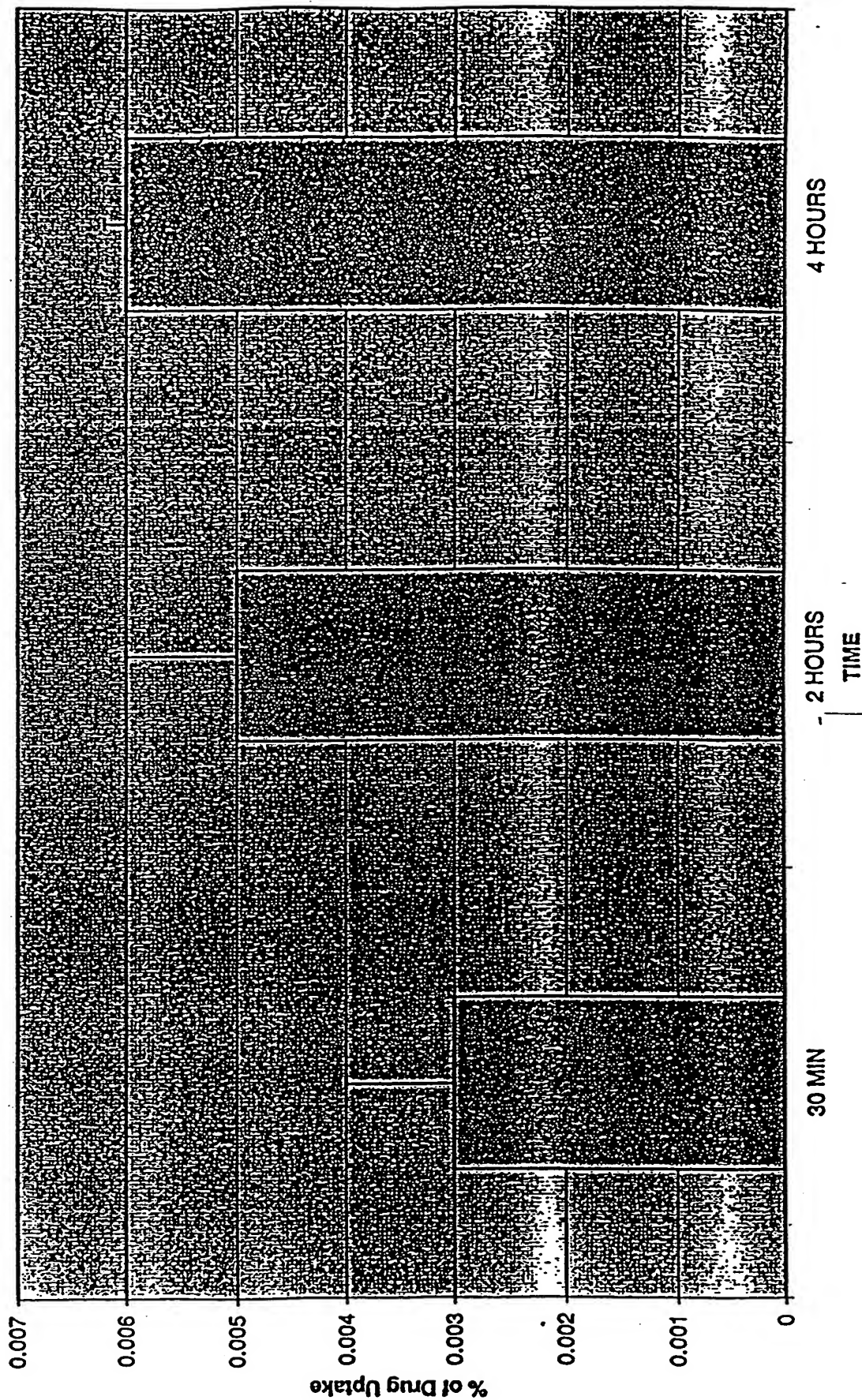


FIG. 55A

In Vitro Cellular Uptake of  $^{99m}\text{Tc}$ -EC-DG-GAP in Human Lung Cancer Cell Line (A549)

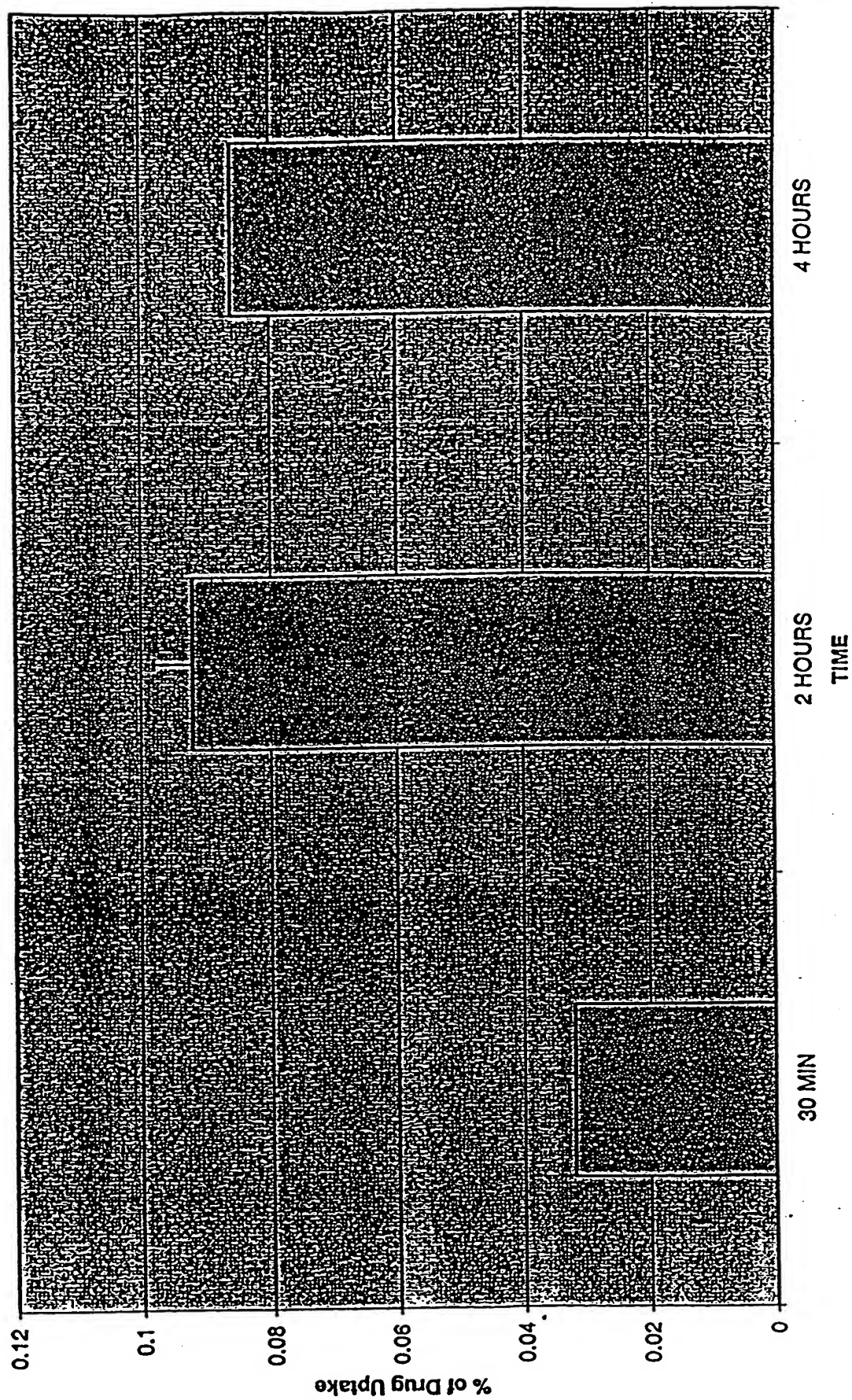


FIG. 55B

In Vitro Cellular Uptake of  $^{18}\text{F}$ FDG in Human Lung Cancer Cell Line (A549)

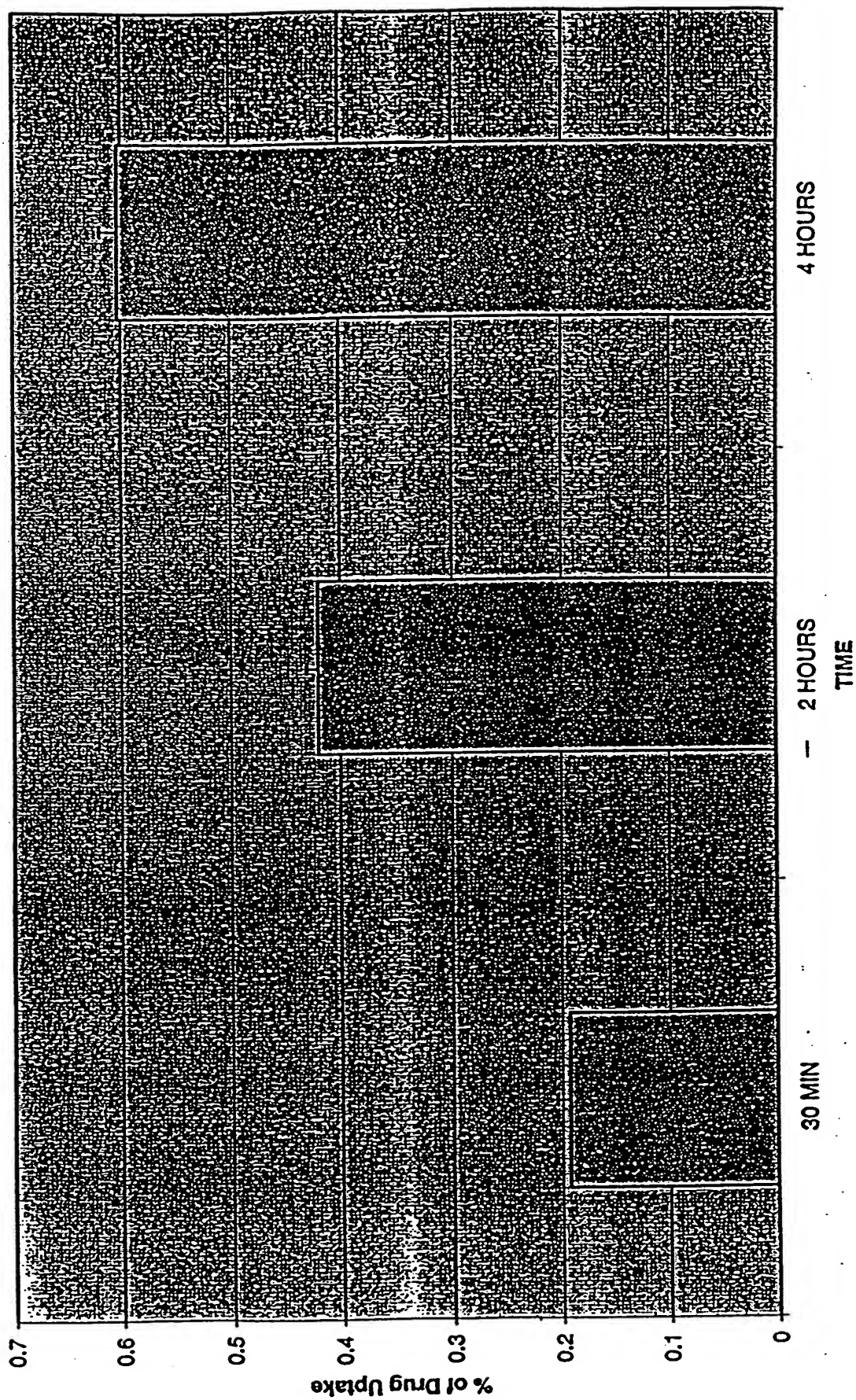


FIG. 55C



Tumor-to-tissue count density ratios of  $^{99m}\text{Tc}$ -EC-GAP in breast tumor-bearing rats  
(n=3/Interval; 10  $\mu\text{Ci}/\text{rat}$ , IV)

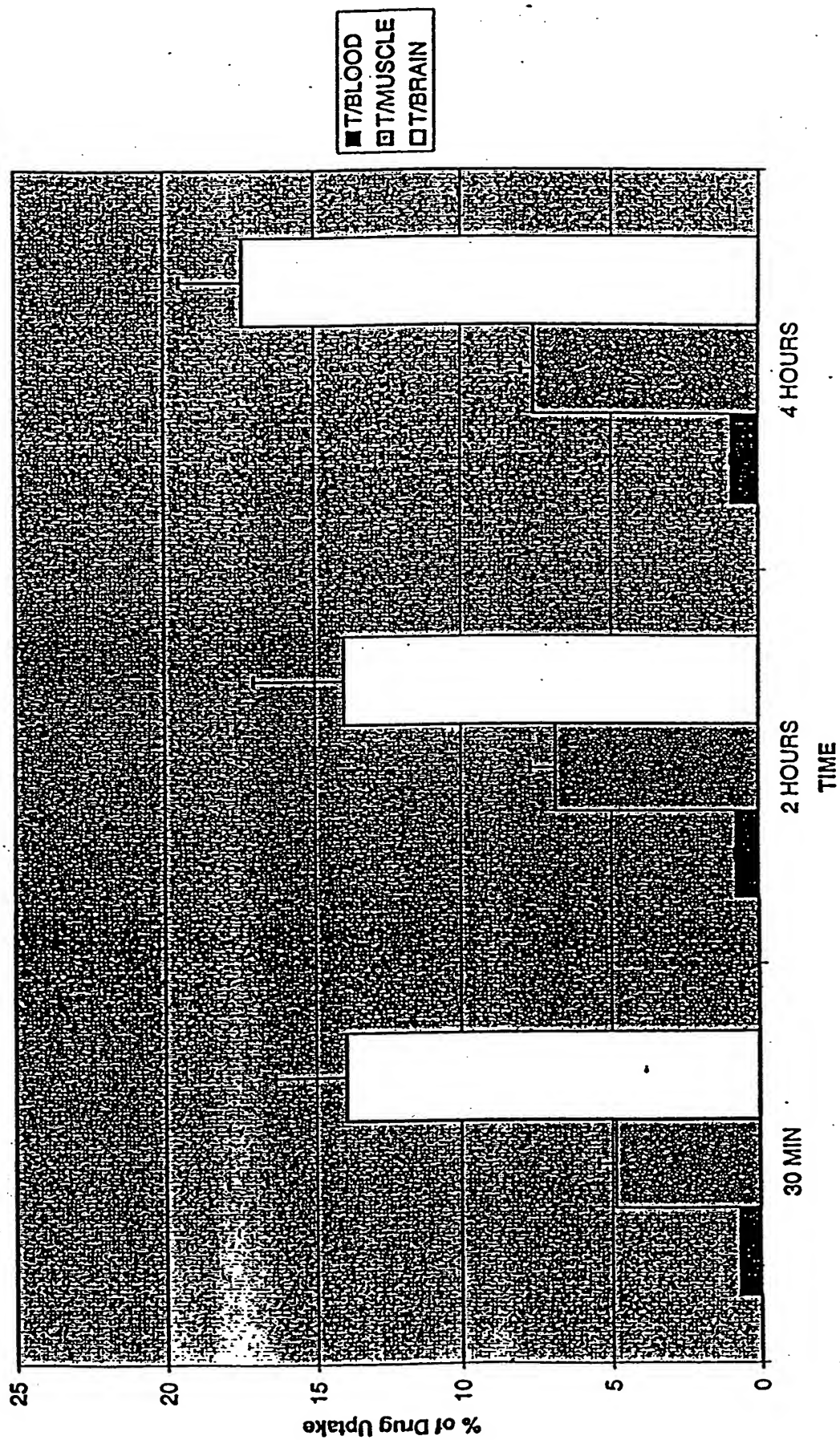


FIG. 56

In Vitro Cellular Uptake of  $^{18}\text{F}$ FDG with Glucose Loading at 2 Hours Post-Injection in Breast  
Cancer Cell Line (13762)

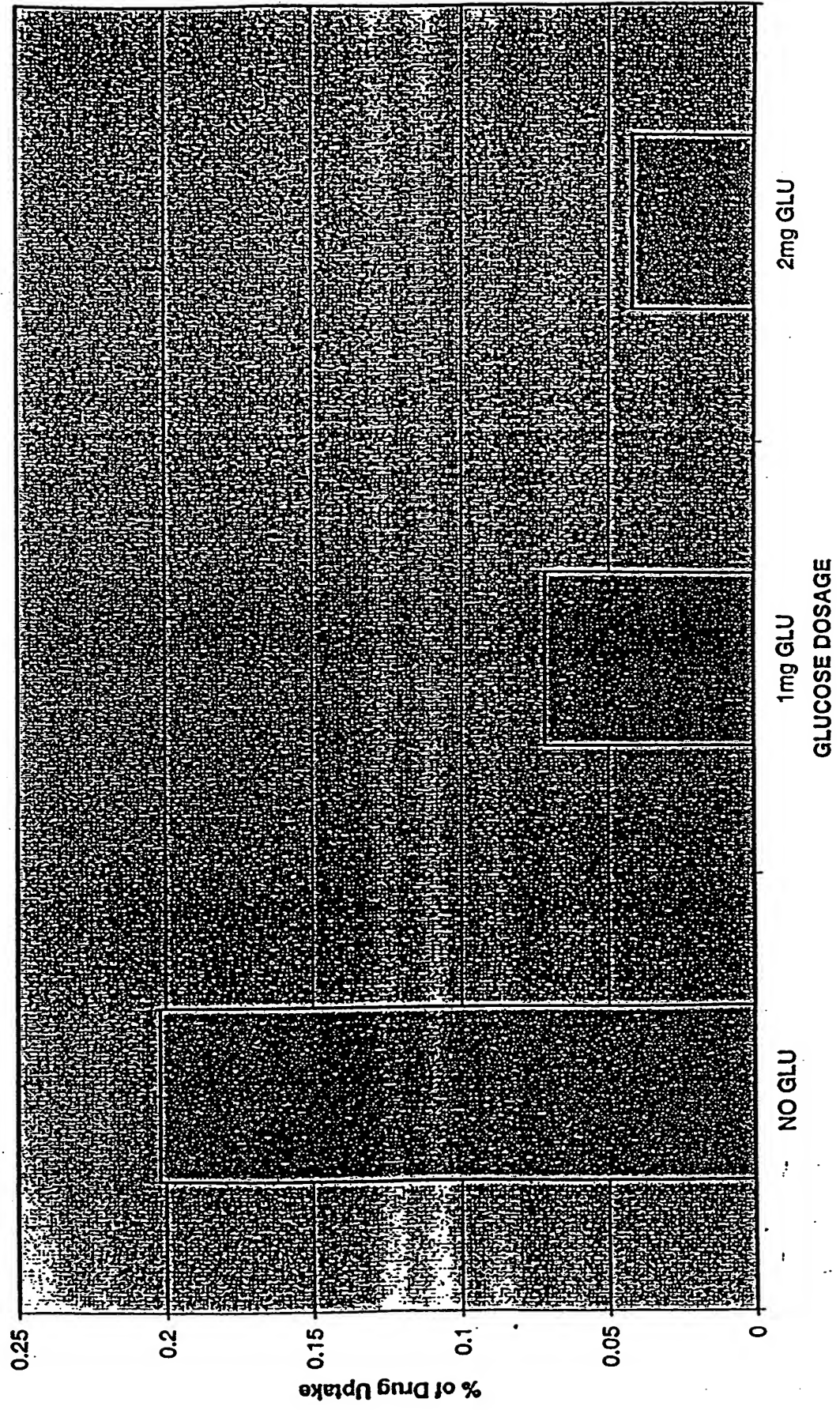


FIG. 57



% Uptake of  $^{99m}\text{Tc}$ -EC-Neomycin In Breast Tumor-Bearing Rats

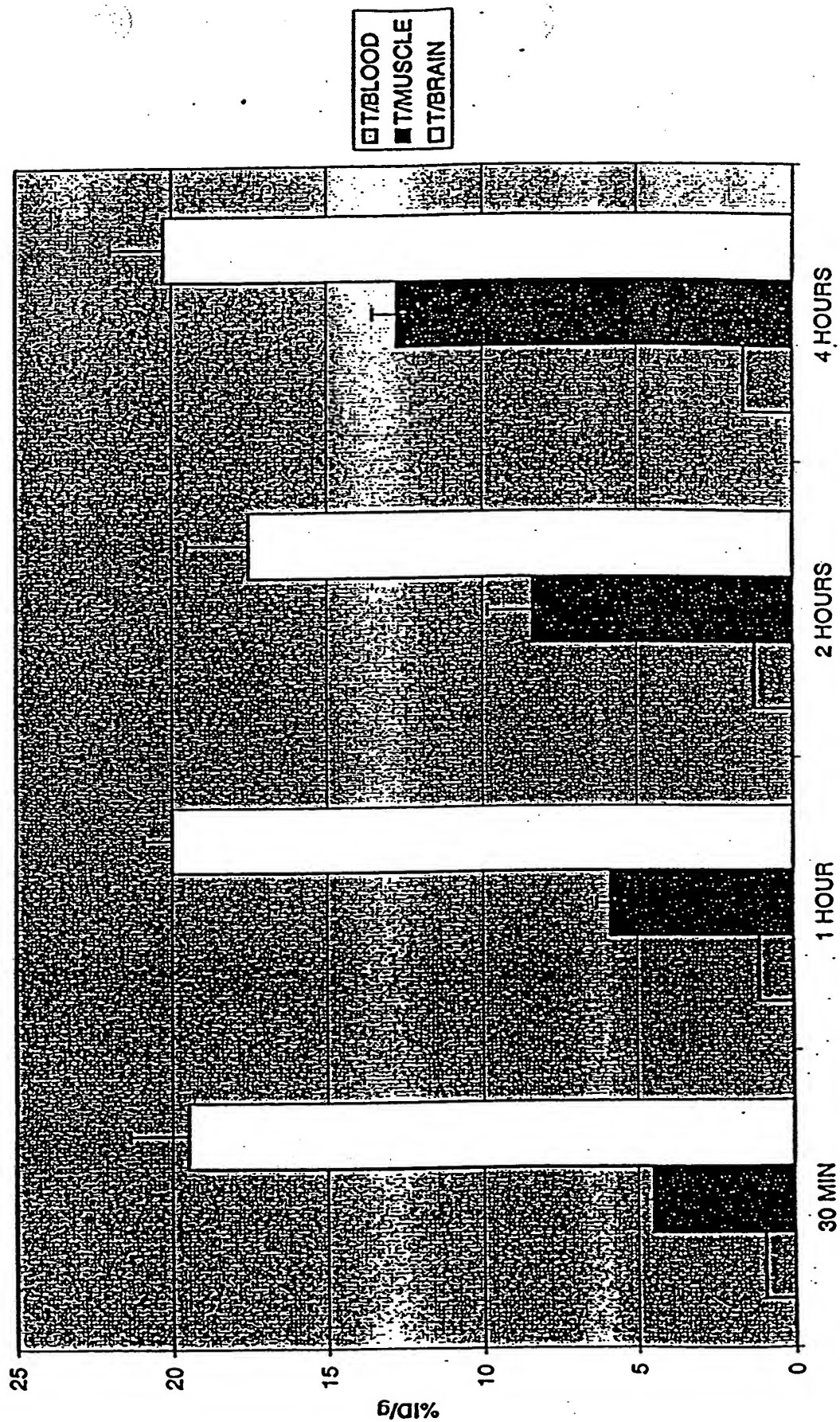
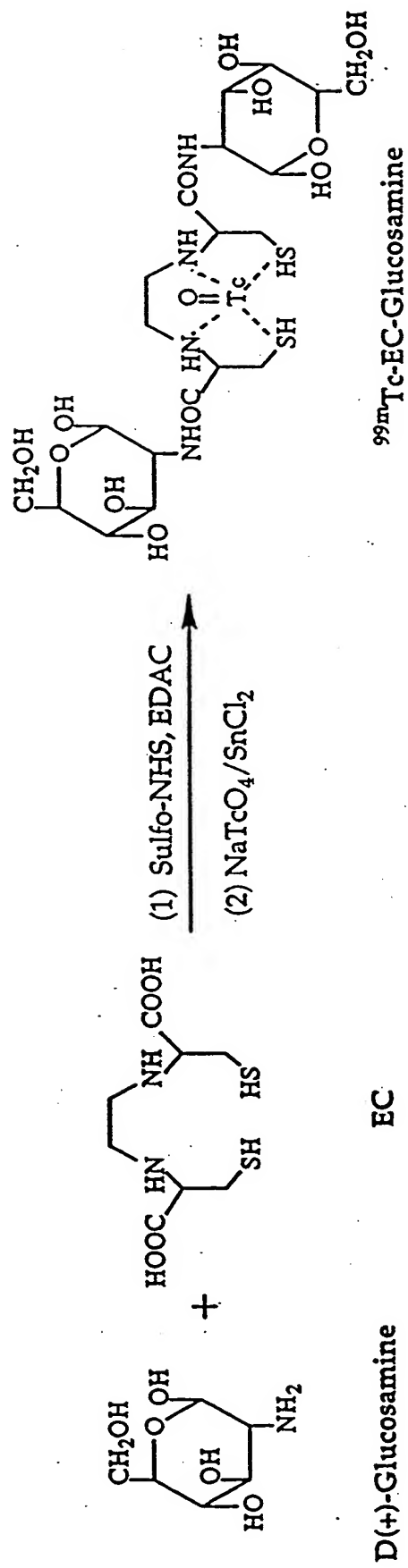


FIG. 58

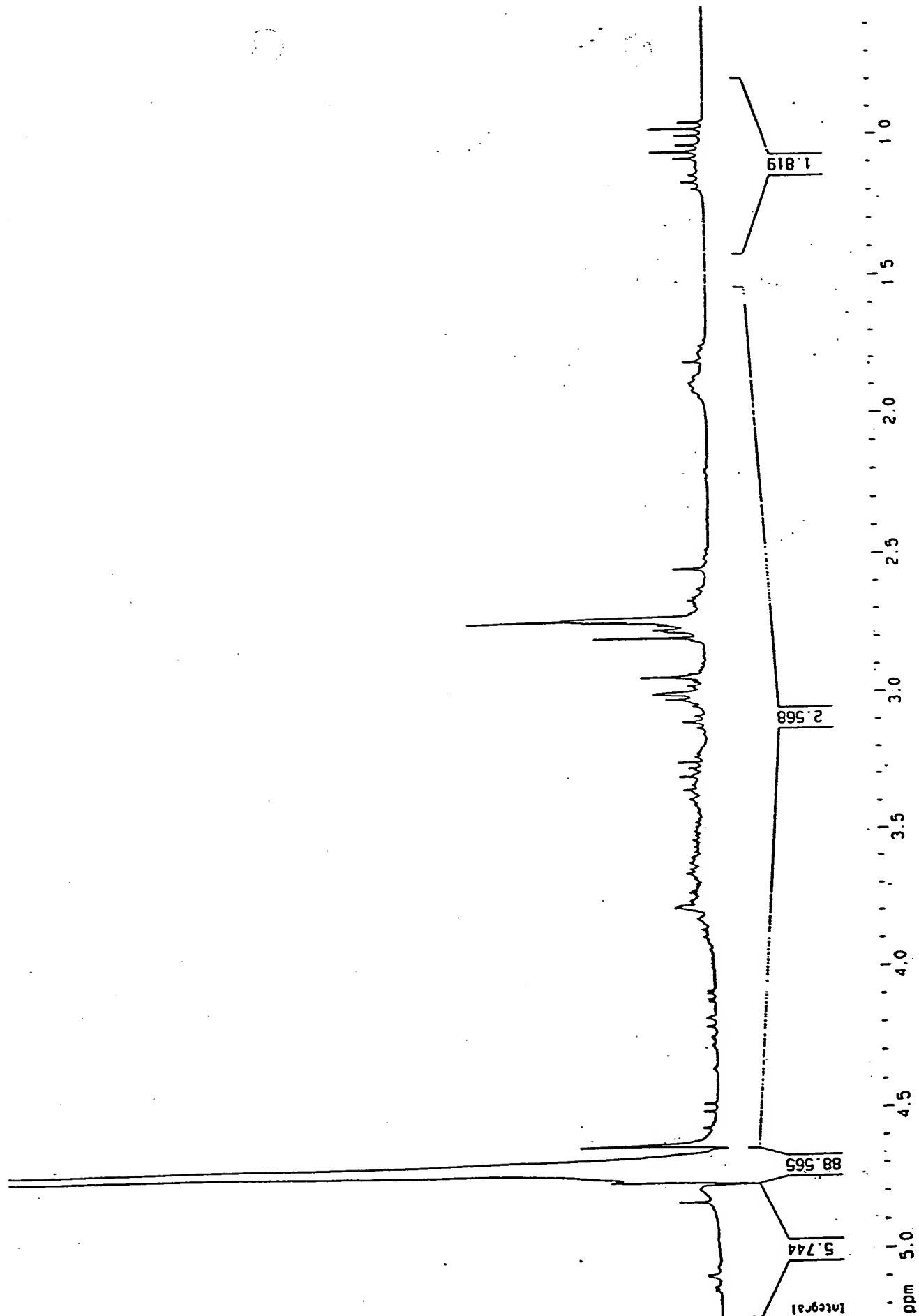


Synthetic scheme of  $^{99\text{m}}\text{Tc-EC-deoxyglucose}$ .

FIG. 59

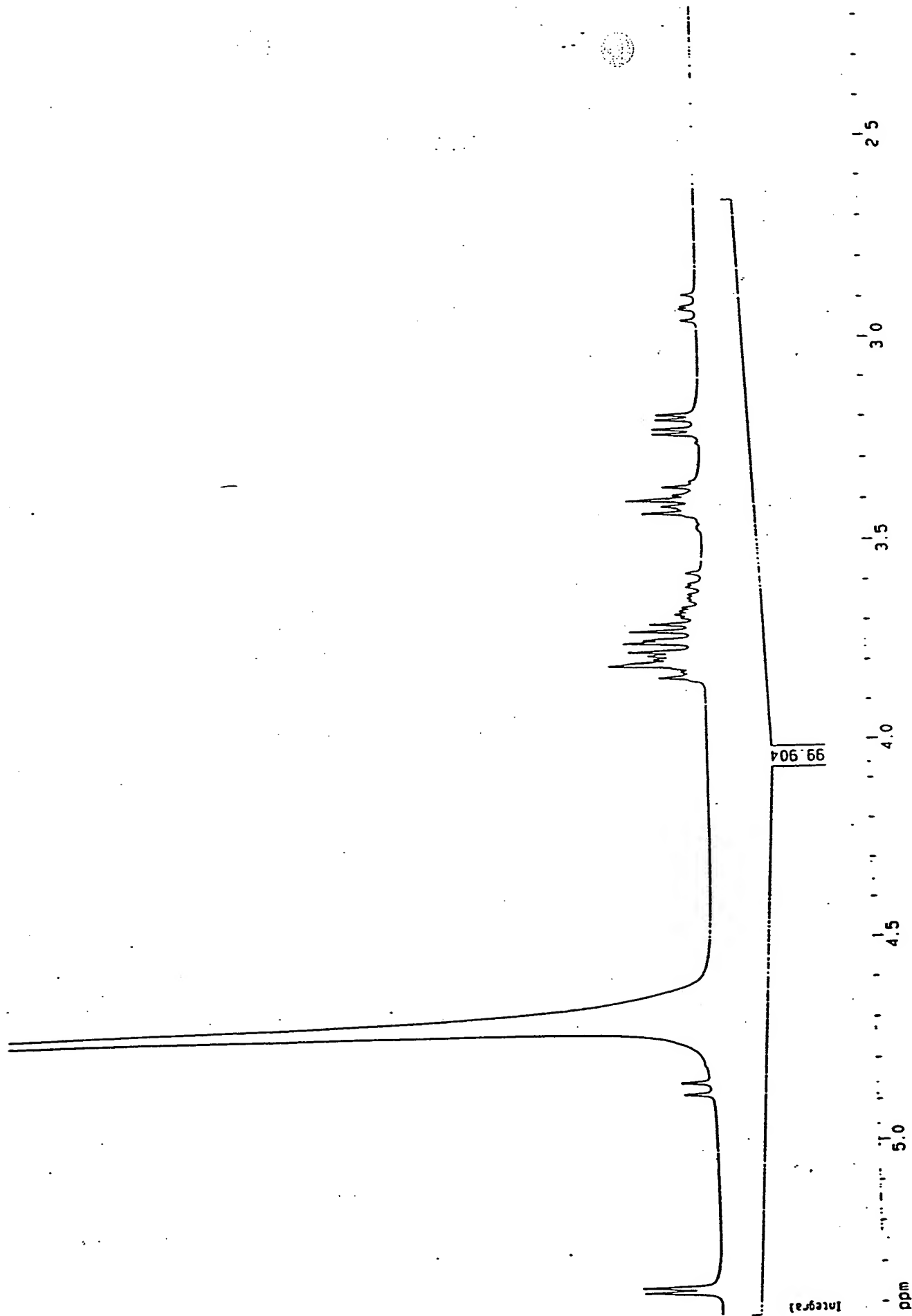


EC-DG



<sup>1</sup>H-NMR of EC-deoxyveluense (EC-DG).

Glucoseamine



$^1\text{H}$ -NMR of glucosamine.

0653528480

04-03 18:55 MON FROM: WON KJANG HOSP

0653528480

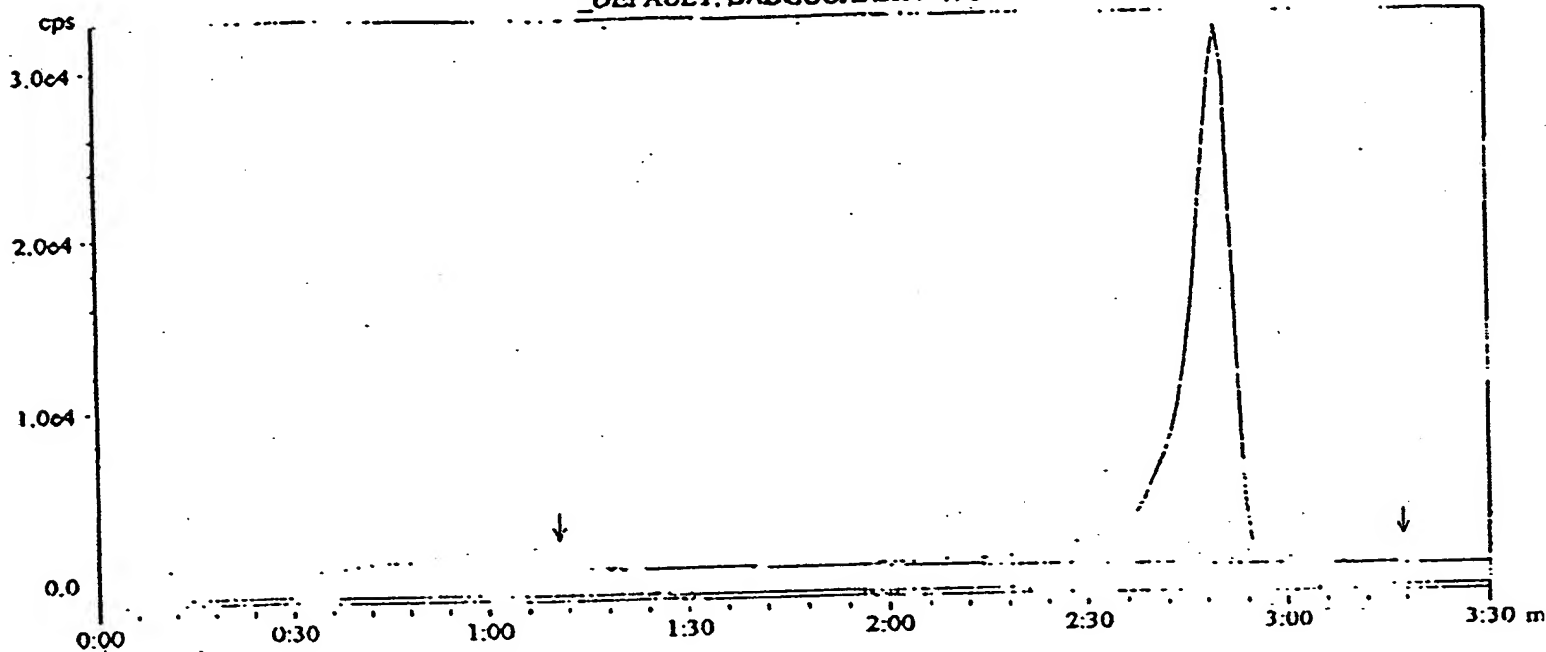
1 00117137453372

PAGE: 01

Method: DEFAULT File: BABGCCAF.R01 Raw data User: EC-Glucosami

(Mm TC EC-DG TLC)

DEFAULT: BABGCCAF.R01-H-3



signals: BABGCCAF.R01

Channel: H-3	Detector:						
Name	Start - End	RT	Height (cps)	Area (Counts)	%Total (%)	%ROI (%)	
Bkg 1	0:00- 2:19	1:09	539.7				
Rgn 1	2:19- 3:02	2:47	31606.2	263570.8	97.99	100.00	
Bkg 2	3:02- 3:27	3:14	250.1				
1 Peak				263570.8	97.99	100.00	

Total Area = 268986.1 Counts  
 Bkg Area = 89999.9 Counts  
 Unallocated = 5415.3 Counts (2.01%)

Trace Parameters: BABGCCAF.R01 H-3

Trace Display Smoothing: 0.0 s  
 Trace Display Shift: 0.0 s  
 Trace Display Factor: 1.000  
 Channel Shift: 0.0 s  
 Channel Factor: 1.000

Regions were added manually.

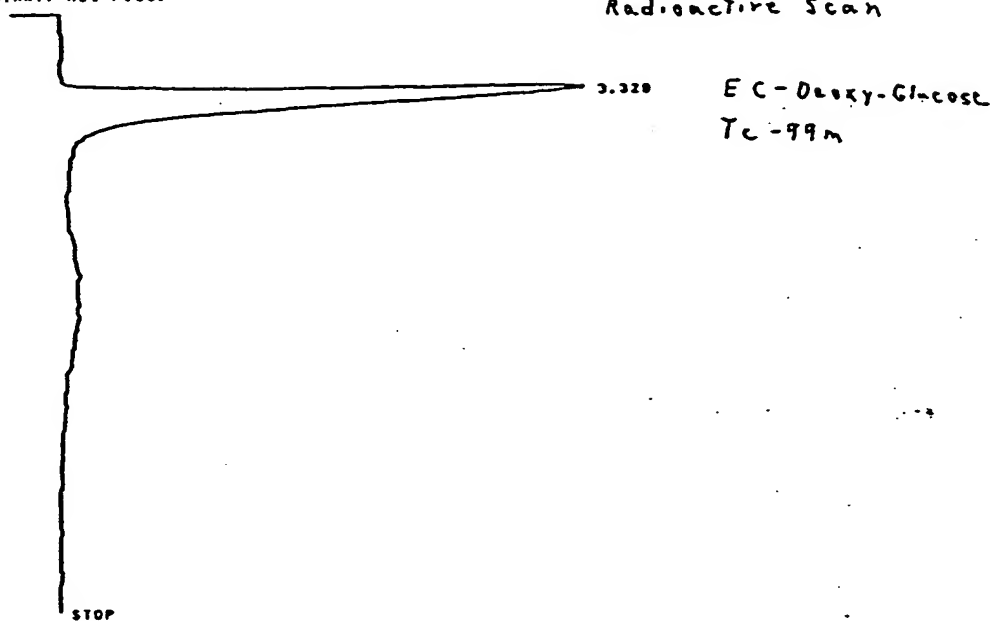
FIG. 63

Radio-TLC analysis of  $^{99m}\text{Tc}$ -EC-DG.

<sup>99m</sup>Tc-EC-deoxyglucose

Rad Aminex HPX-87C  
Column  
250 x 4 mm  
.4 ml/min. H<sub>2</sub>O at  
25°C  
Radioactive Scan

• ATT 2-7 8  
• RUN 5 3 MAR 30, 1999 14143128  
STARTS not ready



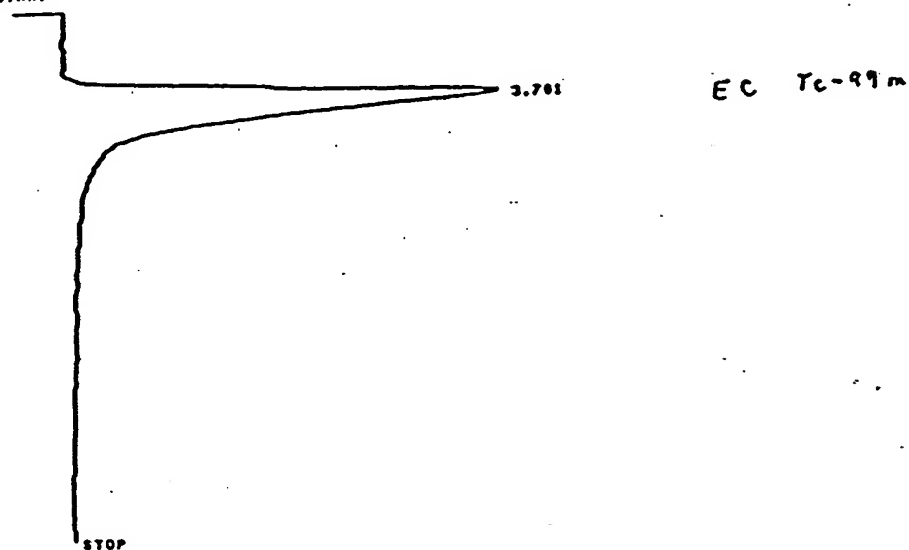
RUN 5 3 MAR 30, 1999 14143128

RT	AREA	TYPE	WIDTH	AREA
3.320	33350000	SV	.813	100.00000

TOTAL AREA=3.3338E+07  
NUL FACTOR=1.0000E+00

Radioactive Scan

• RUN 6 6 MAR 30, 1999 15109139  
START



RUN 6 6 MAR 30, 1999 15109139

RT	AREA	TYPE	WIDTH	AREA
3.701	16673104	SV	.310	100.00000

TOTAL AREA=1.6671E+07

<sup>99m</sup>Tc-EC

FIG. 64

HPLC analysis of <sup>99m</sup>Tc-EC-deoxyglucose and <sup>99m</sup>Tc-EC-  
(radioactive detector).

• ATT 2^ BREAK

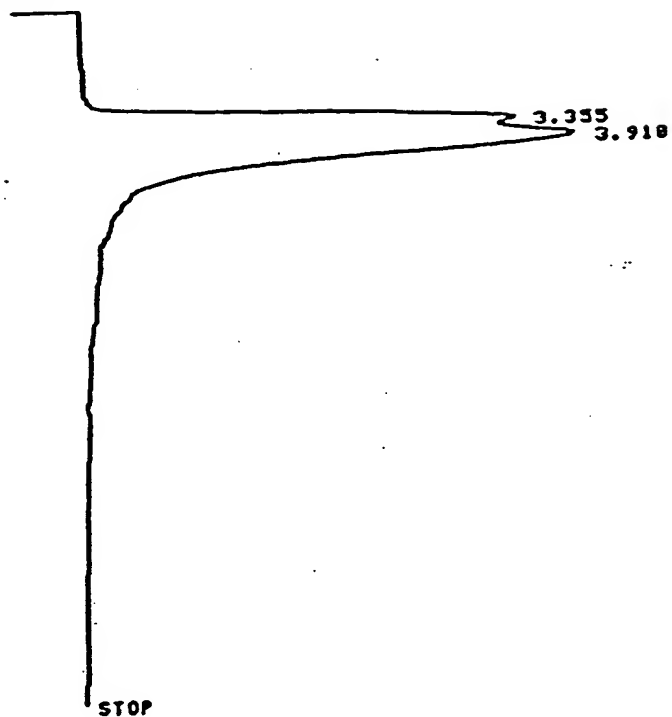
BREAK

• LIST: ATT 2^ = 7

• ATT 2^ 8 0

• RUN 0 7 MAR 30, 1999 15132137

START



Radioactive Scan

Mixed Tc-99m  
EC-Deoxy-Glucose  
EC

<sup>99m</sup>Tc-EC-deoxyglucose + <sup>99m</sup>Tc-EC  
(mixed)

RUN# 7 MAR 30, 1999 15132137

AREA#	RT	AREA	TYPE	WIDTH	AREA%
	3.355	22173760	BV	.448	50.46186
	3.918	21767872	VV	.387	49.53814

TOTAL AREA=4.3942E+07  
MUL FACTOR=1.0000E+00

FIG. 65

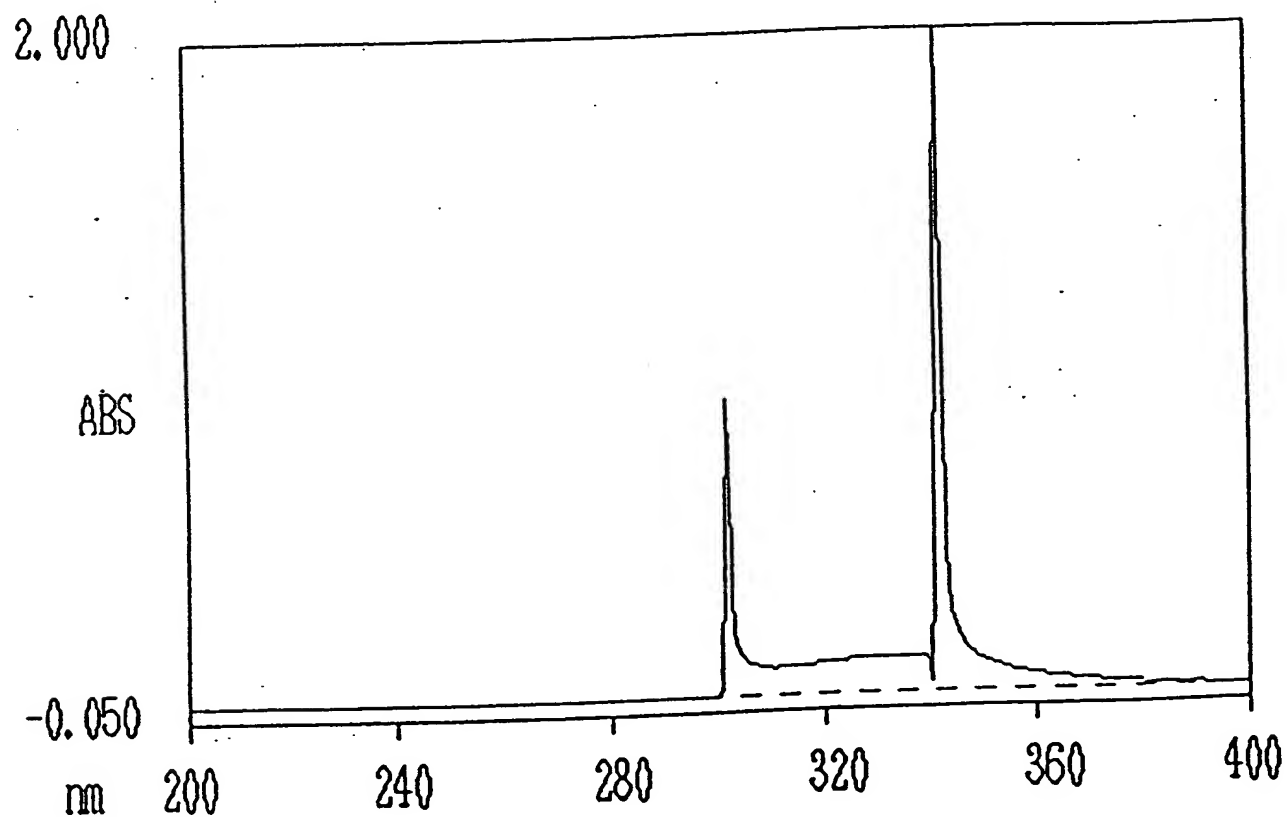
HPLC analysis of <sup>99m</sup>Tc-EC-deoxyglucose and <sup>99m</sup>Tc-EC  
(radioactive detector, mixed).



# Hexokinase Assay of Glucose

WAVELENGTH SCAN/0

03/01/00 14:41



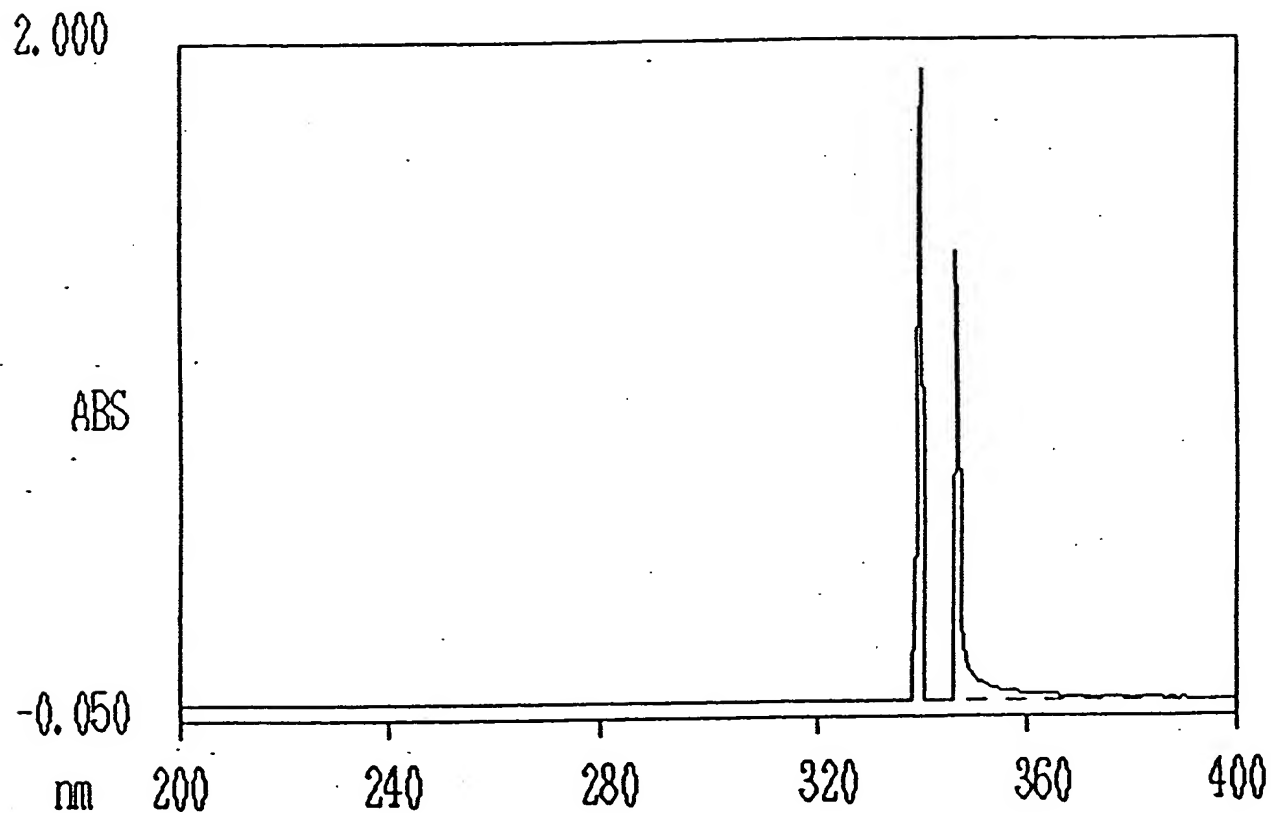
301.5 nm 0.889 ABS  
342.0 nm 2.044 ABS

FIG. 66 Hexokinase assay of glucose.

# Hexokinase Assay of FDG

WAVELENGTH SCAN/0

03/09/00 14:34



340.0 nm 1.906 ABS  
346.5 nm 1.351 ABS

FIG. 67

Hexokinase assay of FDG.

# Hexokinase Assay of EC-Glucosamine (EC-DG)

WAVELENGTH SCAN/0

03/01/00 14:45

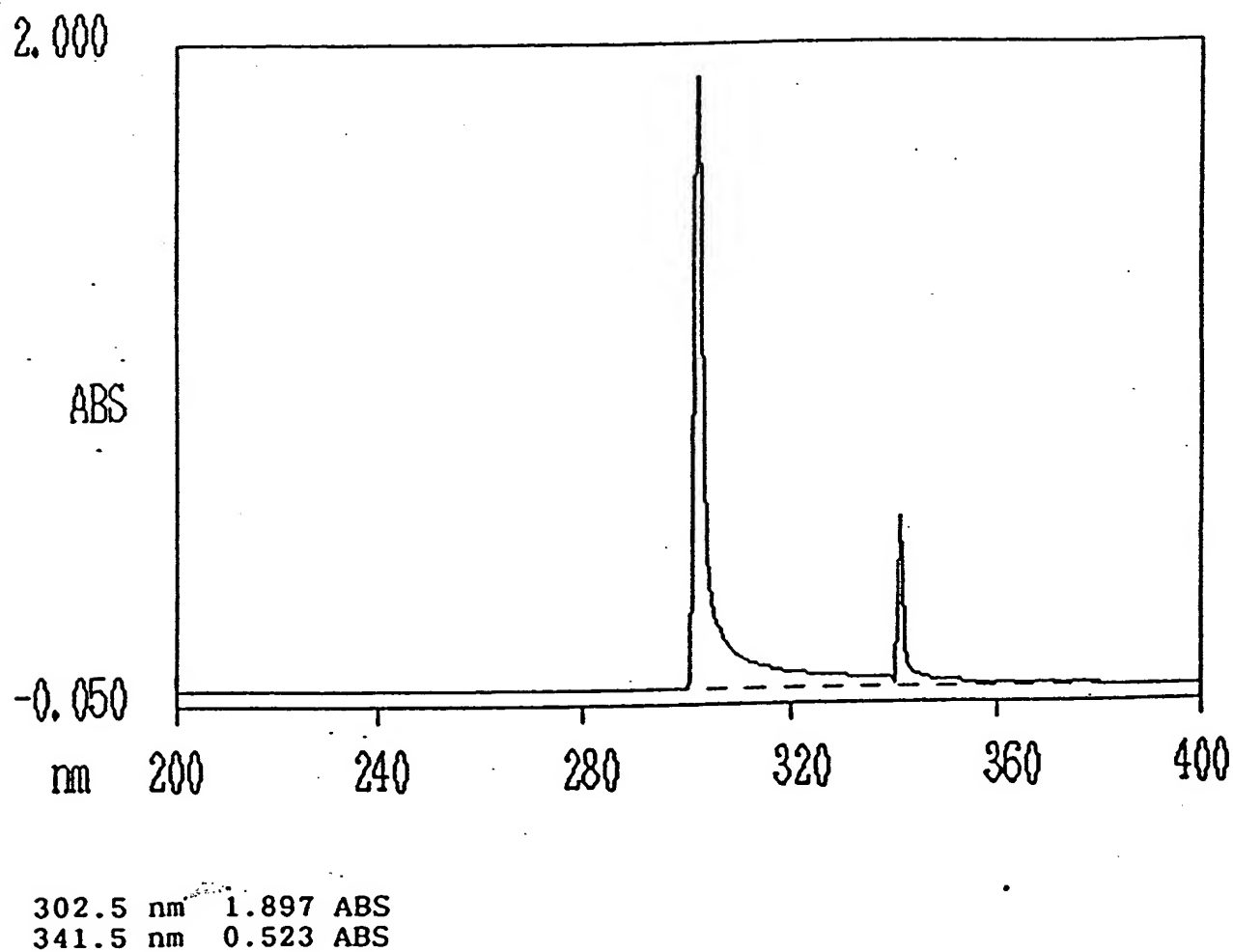
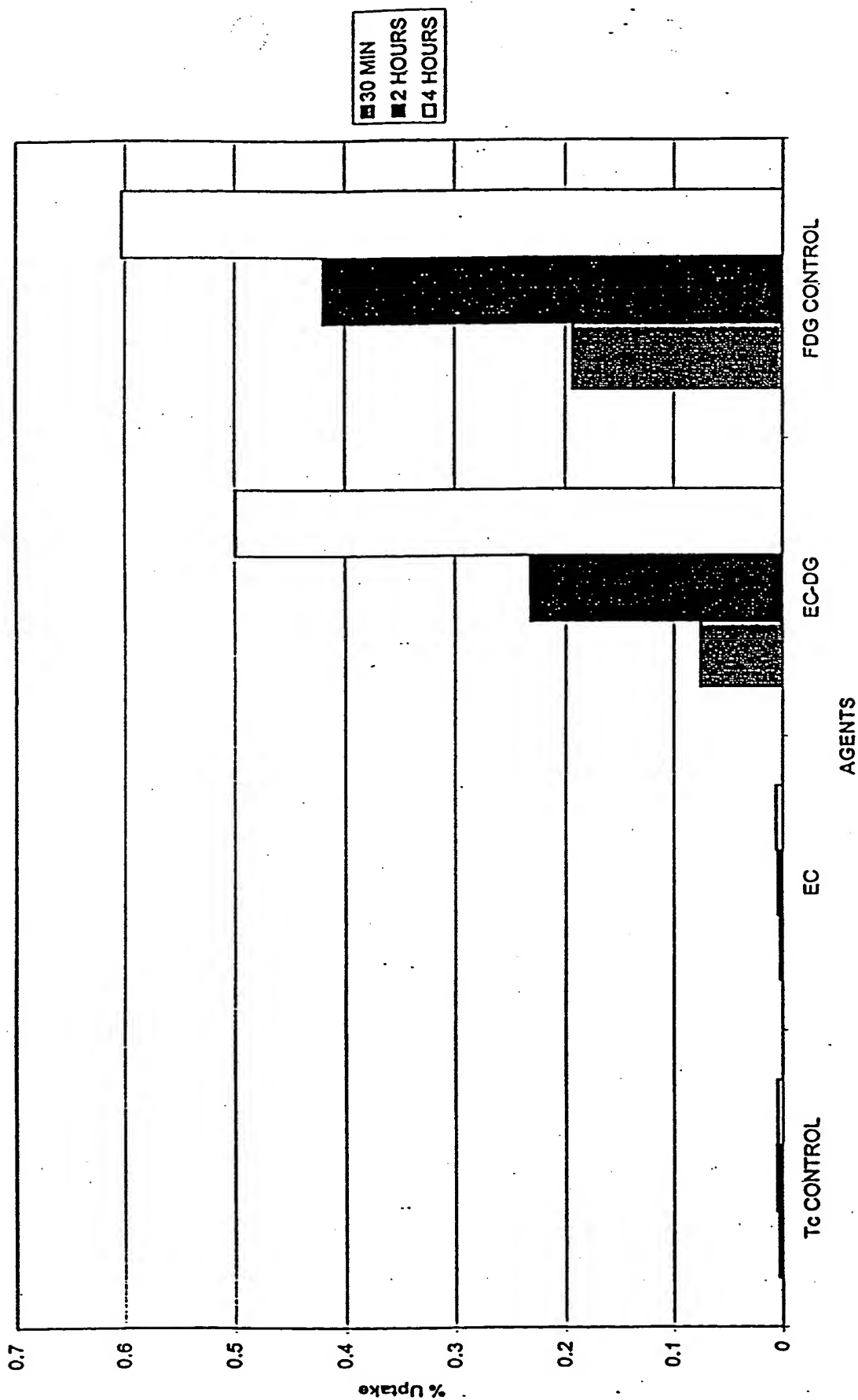


FIG. 68

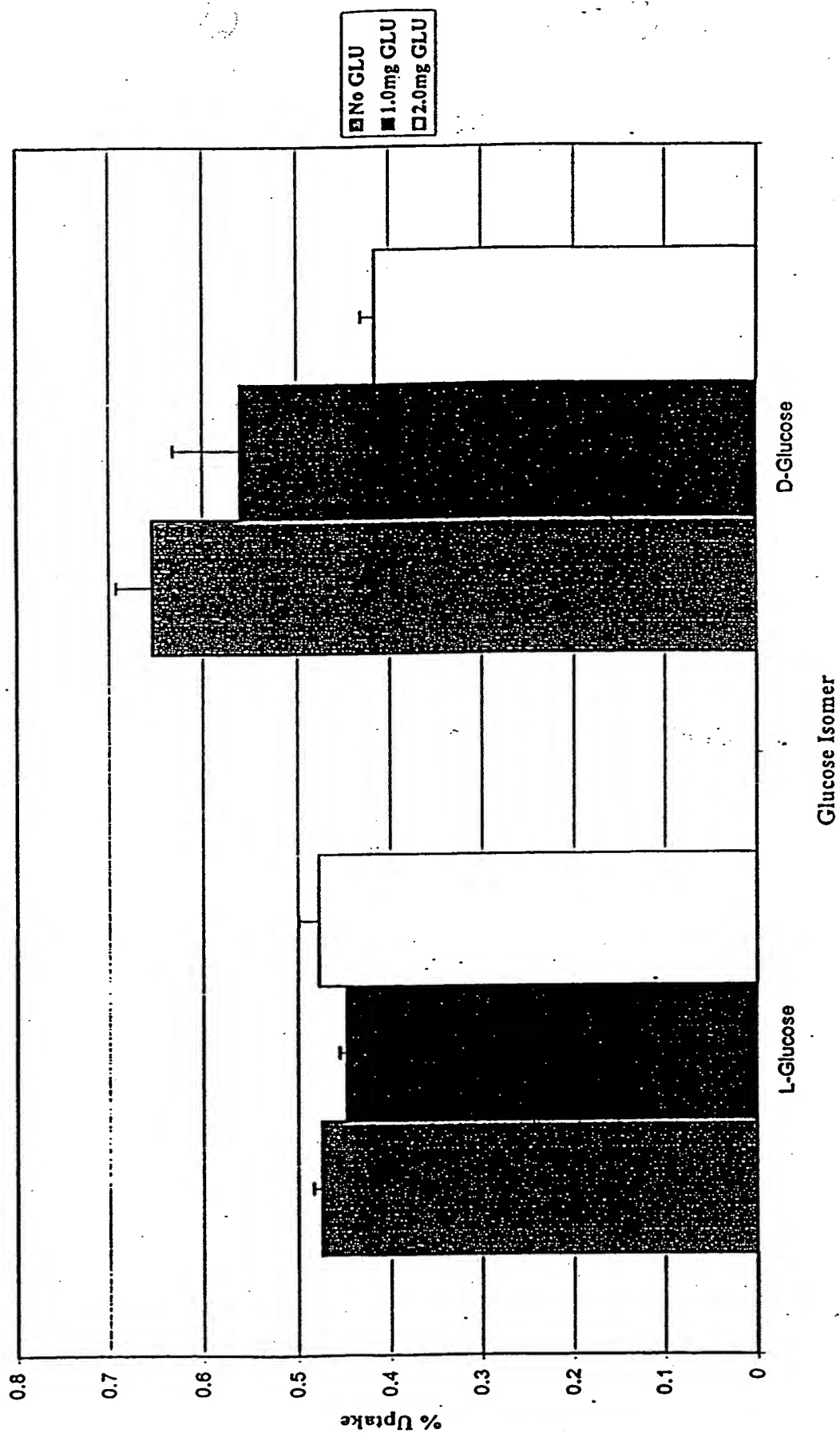
Hexokinase assay of EC-DG.

# % of Drug Uptake In Lung Cancer Cell Line (A549)



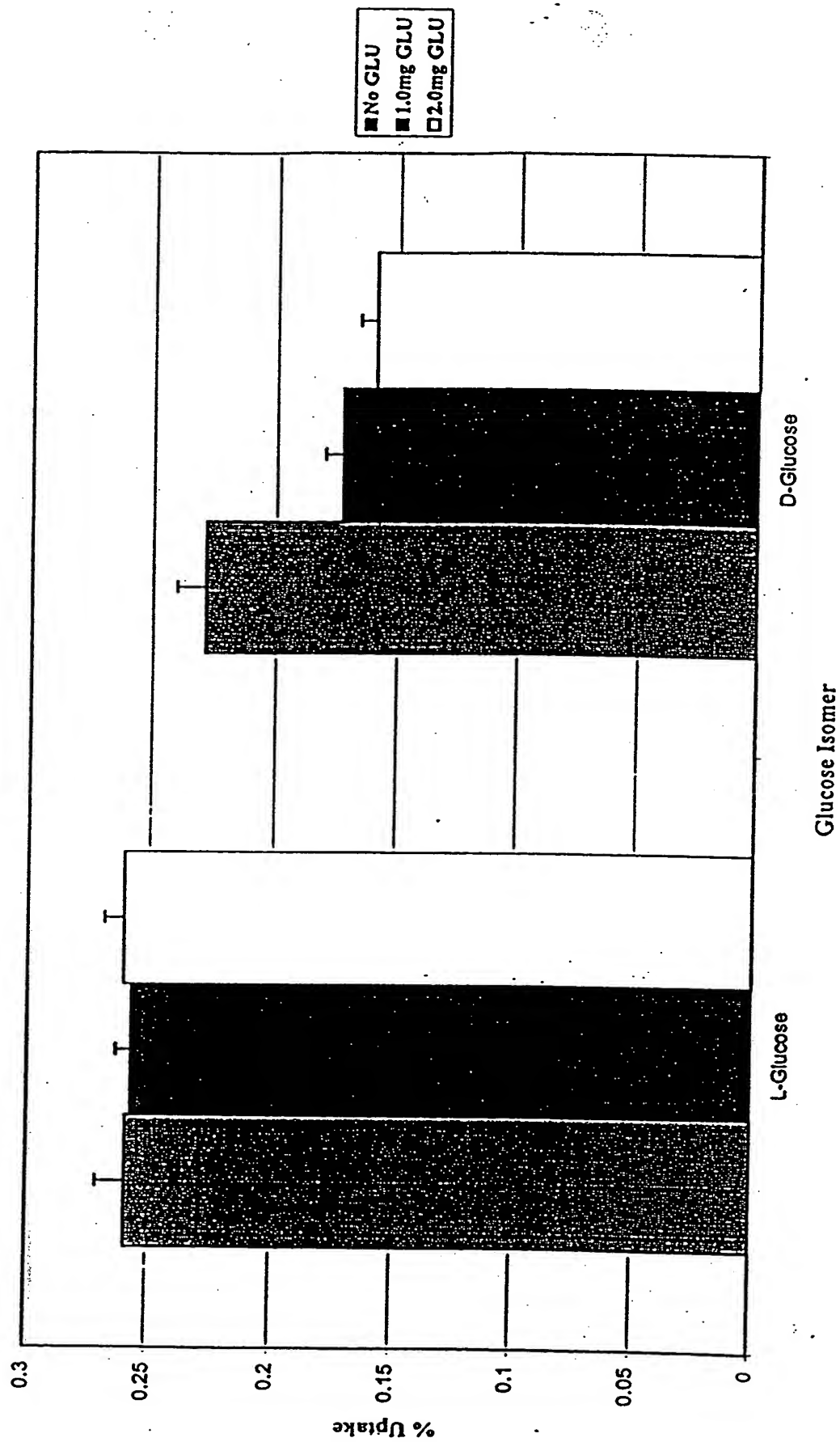
**FIG. 69** In vitro cellular uptake assay of  $^{99m}\text{Tc}$ -EC-deoxyglucose,  $^{99m}\text{Tc}$ -EC and  $^{18}\text{F}$ -FDG in lung cancer cell line (A549).  $^{99m}\text{Tc}$ -EC-DG showed similar uptake compared to  $^{18}\text{F}$ -FDG.

***In Vitro* Cellular Uptake of  $^{99m}\text{Tc}$ -EC-DG in Breast Cancer Cells after Glucose Loading (2 hours  
incubation; 2uCi/well; 50,000 cells/well; 0.5mL/well)**



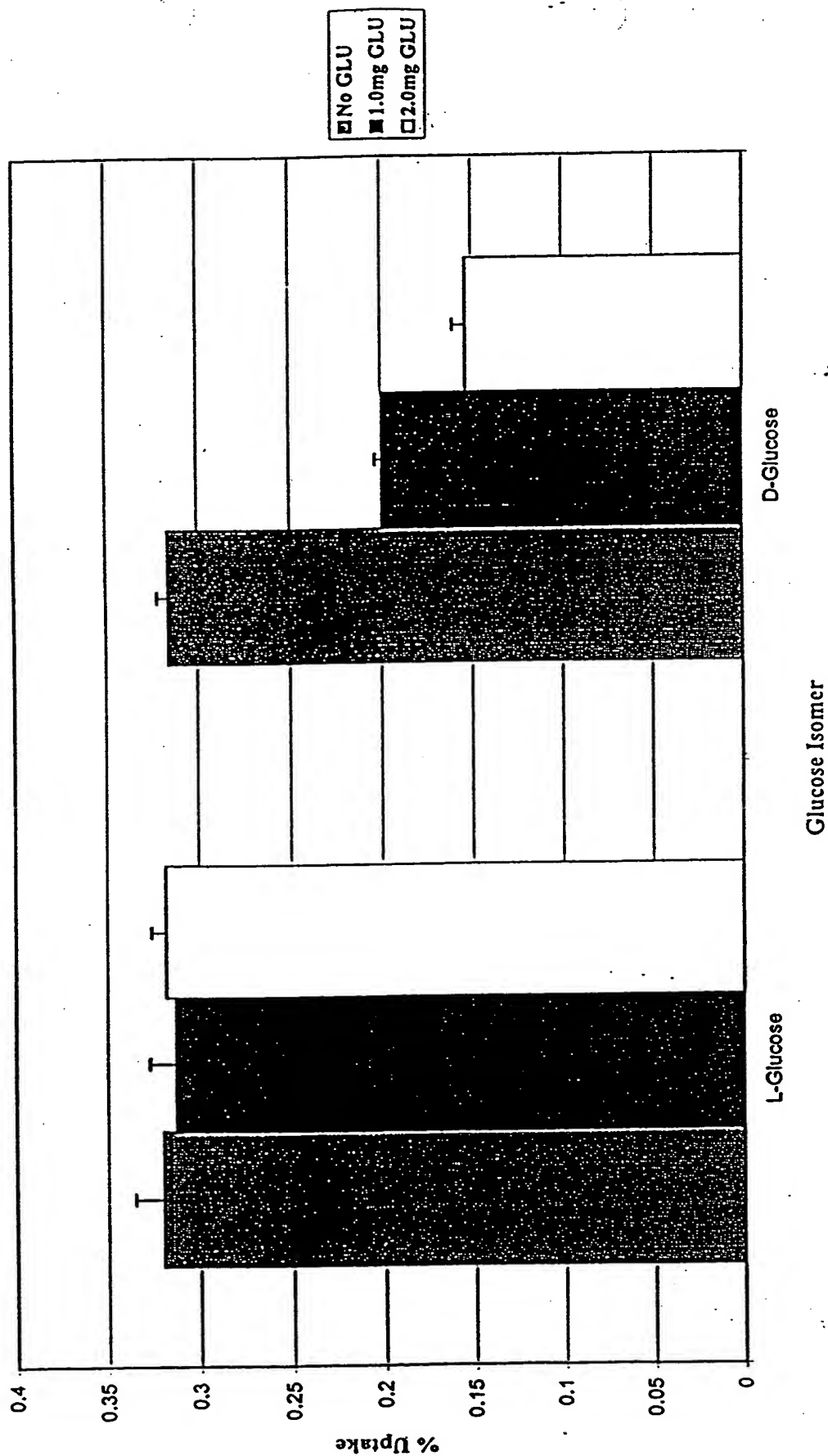
**FIG. 70**  
Effect of d- and l-glucose on breast cellular (13762 cell line) uptake  
of  $^{99m}\text{Tc}$ -EC-DG.

*In Vitro* Cellular Uptake of  $^{18}\text{F}$  FDG in Breast Cancer Cells after Glucose Loading (2 hours  
Incubation; 2uCi/well; 50,000 cells/well; 5mL/well)



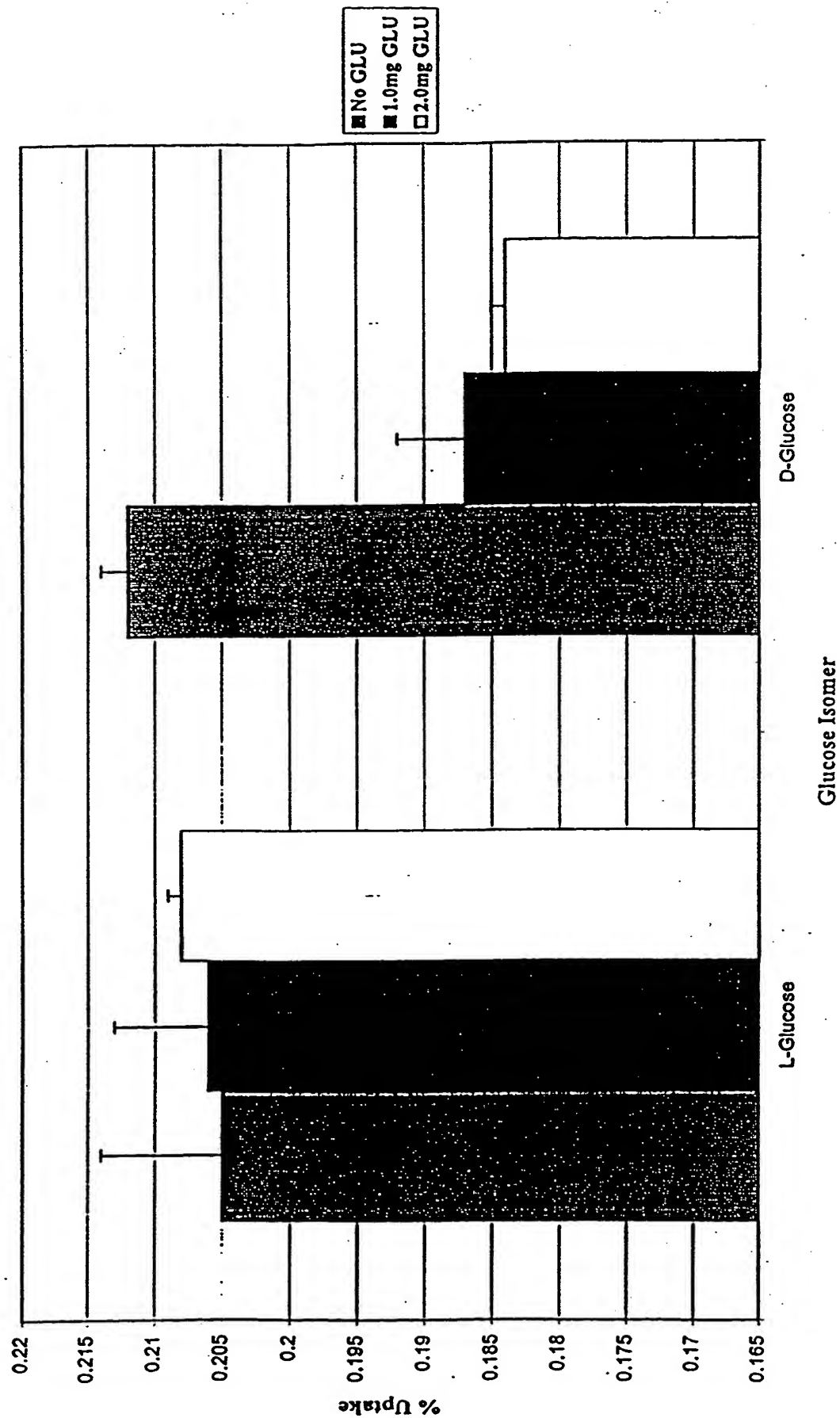
**FIG. 71** Effect of d- and l-glucose on breast cellular (13762 cell line) uptake of  $^{18}\text{F}$ -FDG.

***In Vitro* Cellular Uptake of  $^{18}\text{F}$  FDG in Lung Cancer Cells after Glucose Loading (2 hours incubation;  
2uCi/well; 50,000 cells/well; 5mL/well)**



**FIG. 72** Effect of d- and l-glucose on lungcellular (A549 cell line) uptake of  $^{18}\text{F}$ -FDG.

***In Vitro* Cellular Uptake of  $^{99m}\text{Tc}$ -EC-DG in Lung Cancer Cells after Glucose Loading (2 hours incubation; 2uCi/well; 50,000 cells/well; 0.5mL/well)**



**FIG. 73** Effect of d- and l-glucose on breast cellular (A549 cell line) uptake of  $^{99m}\text{Tc}$ -EC-DG.



# Effect of Intravenous Injection of Glucosamine and EC-DG on Blood Glucose Level in Rats

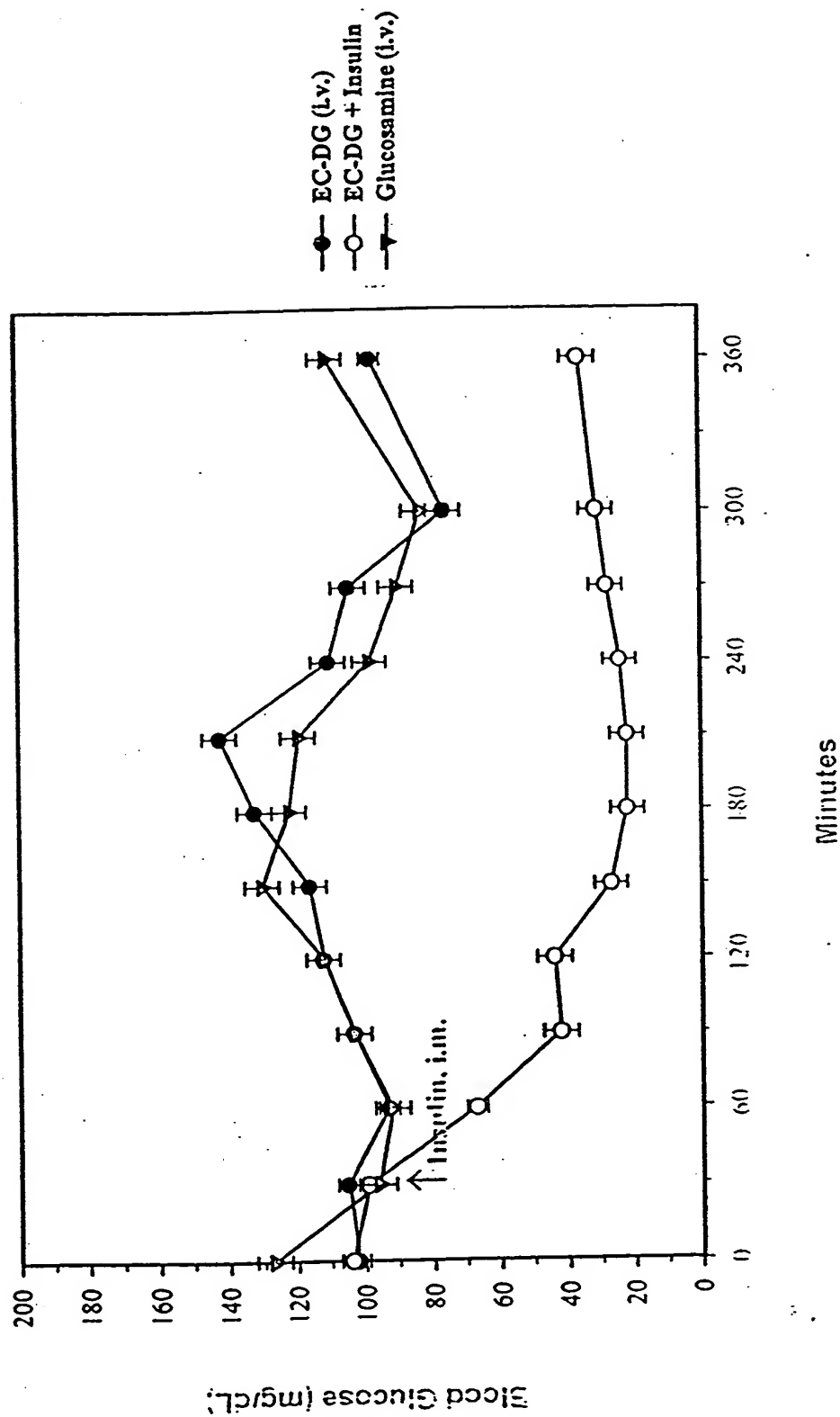
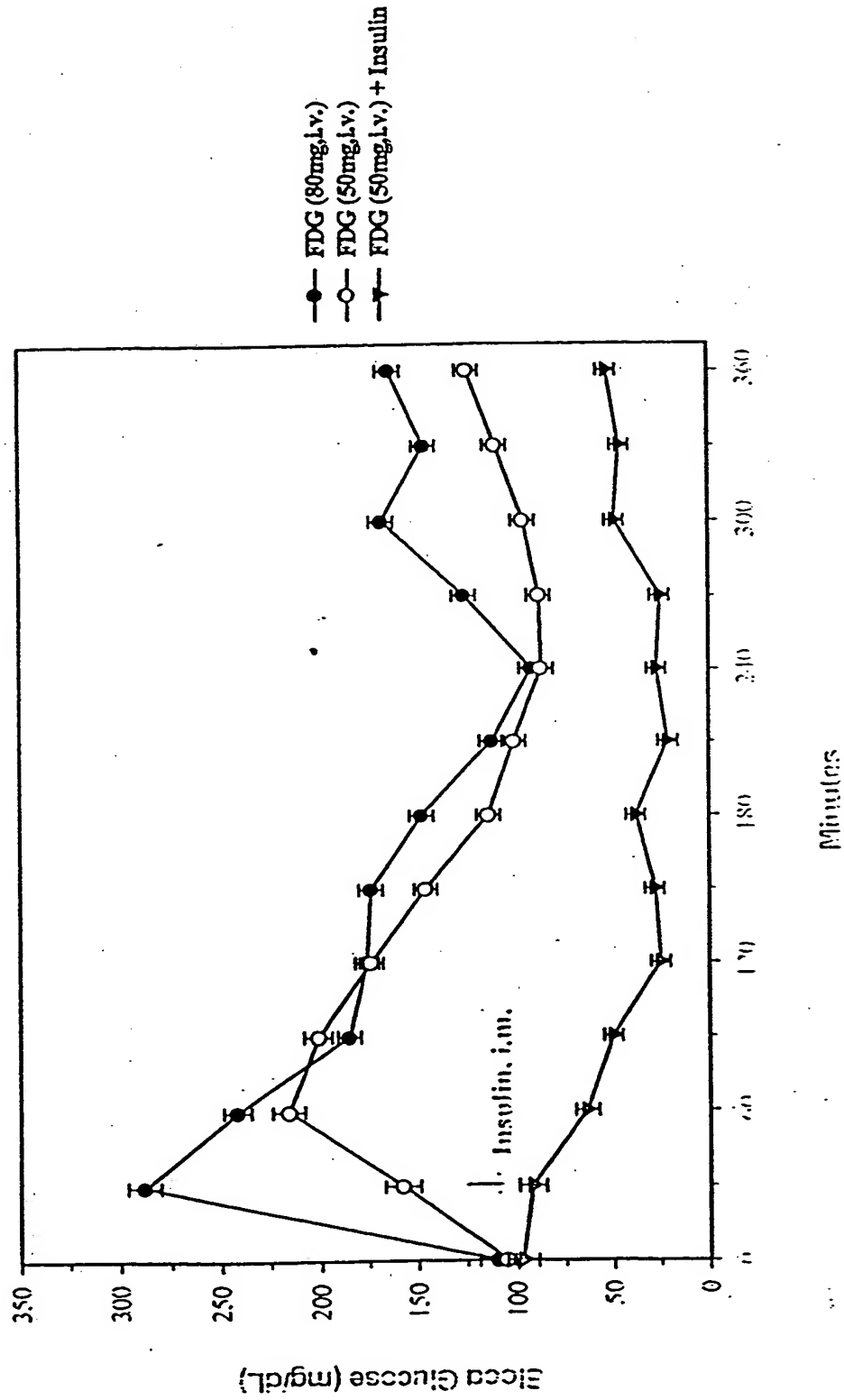


FIG. 74  
Effect of *in vivo* blood glucose level induced by glucosamine and EC-DG (1.2 mmol/kg, i.v.).

# Effect of Intravenous Injection of FDG and FDG+Insulin on Blood Glucose Level in Rats



**FIG. 75** Effect of *in vivo* blood glucose level induced by FDG (1.2 and 1.9 mmol/kg, i.v.) and insulin.

# Tumor-to-Tissue Count Density Ratios of $^{99m}\text{Tc}$ -EC-Deoxyglucose in Breast Tumor-Bearing Rats

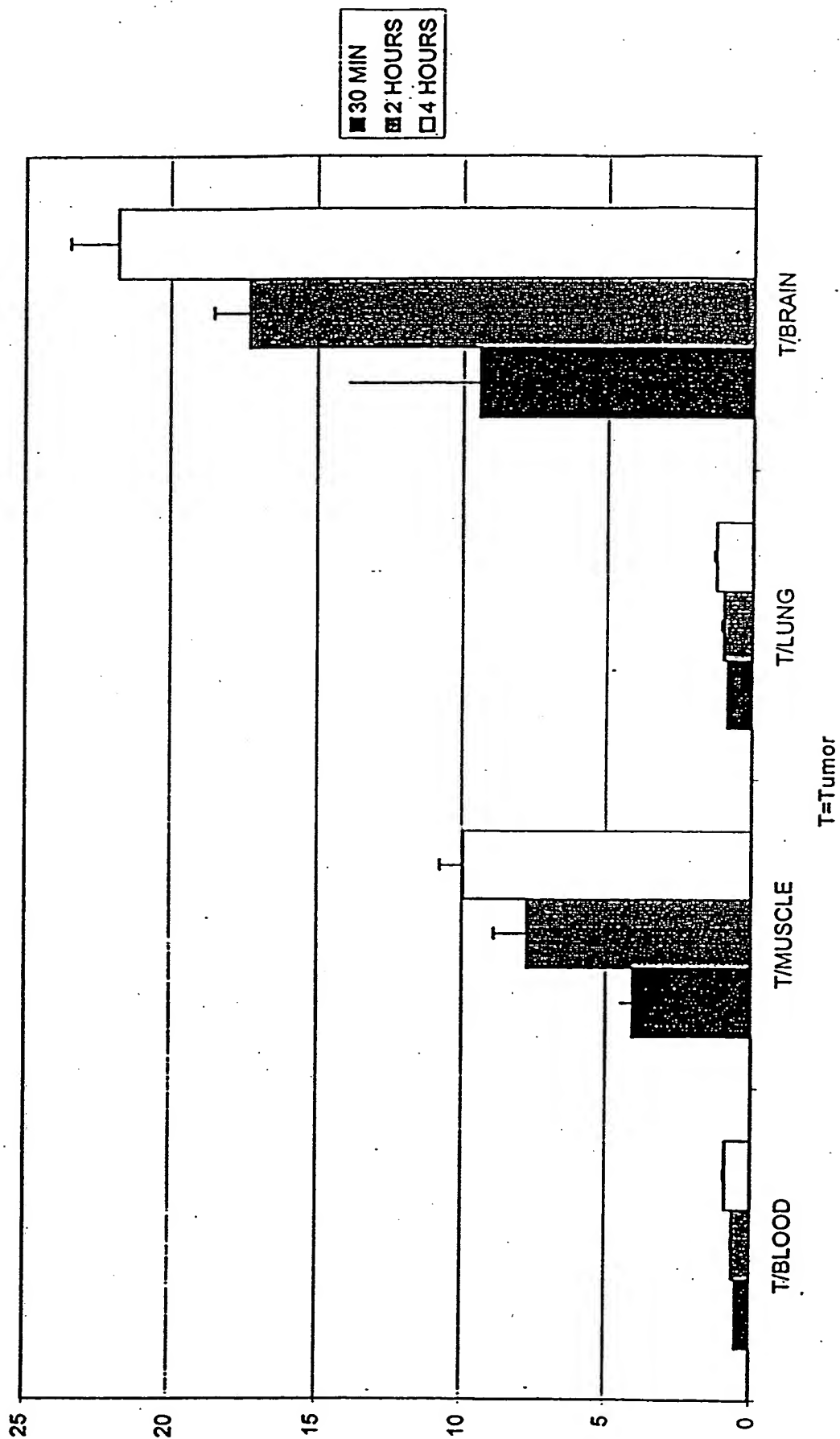
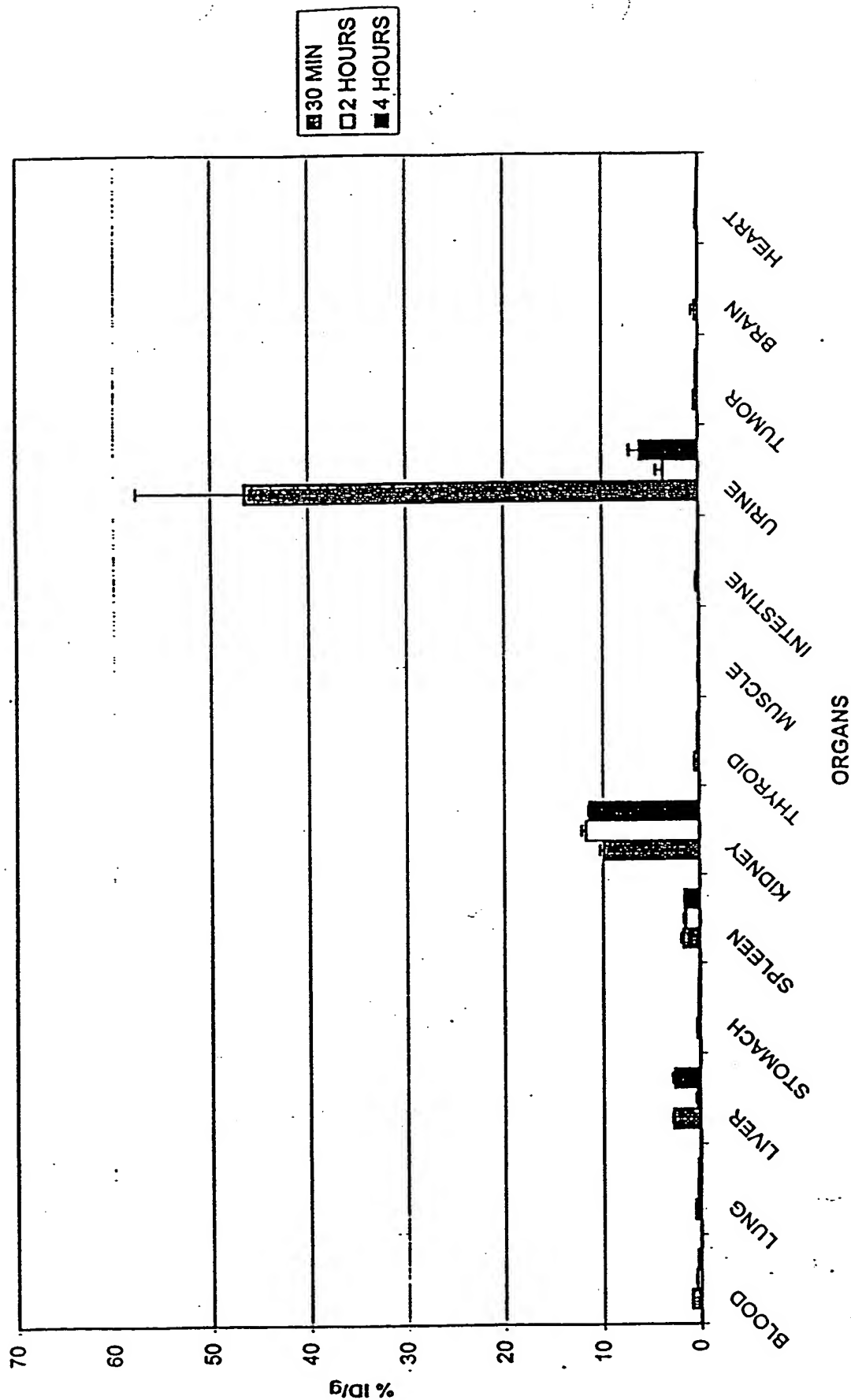


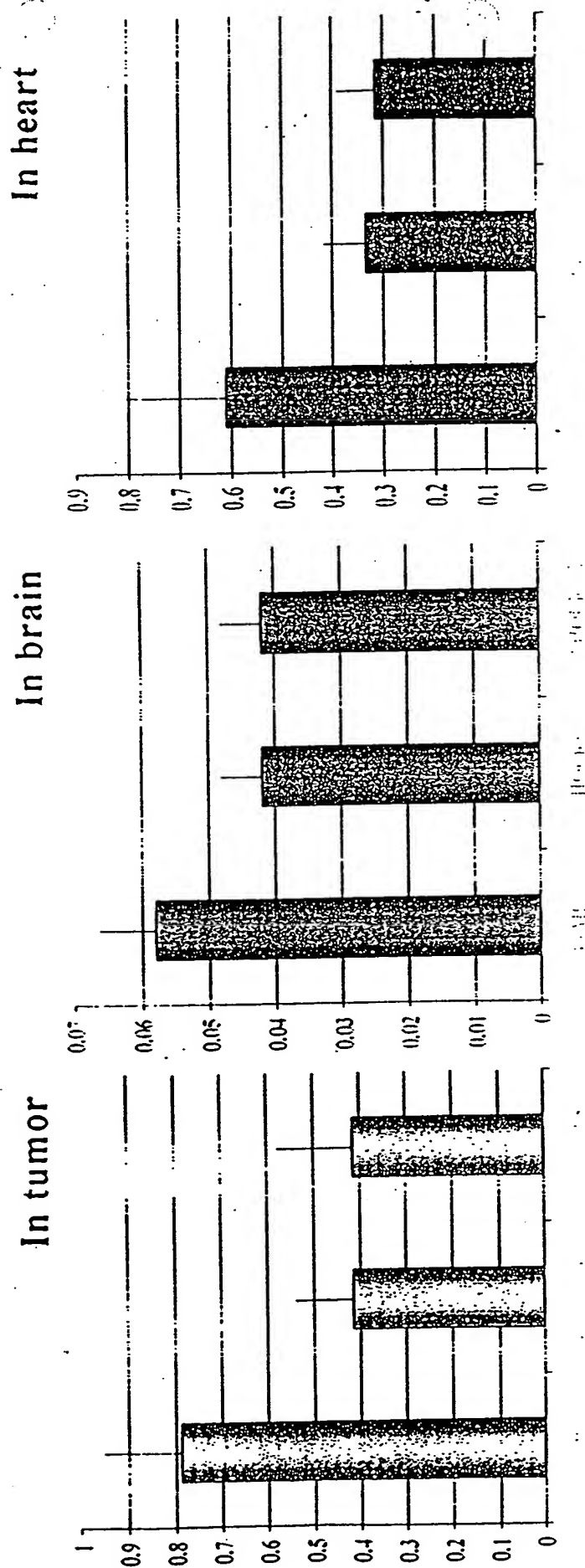
FIG. 76 Tumor-to-tissue count density ratios of  $^{99m}\text{Tc}$ -EC-deoxyglucose in breast tumor-bearing rats.

# *In Vivo Uptake of $^{99m}\text{Tc}$ -EC-Deoxyglucose in Breast Tumor-Bearing Rats*



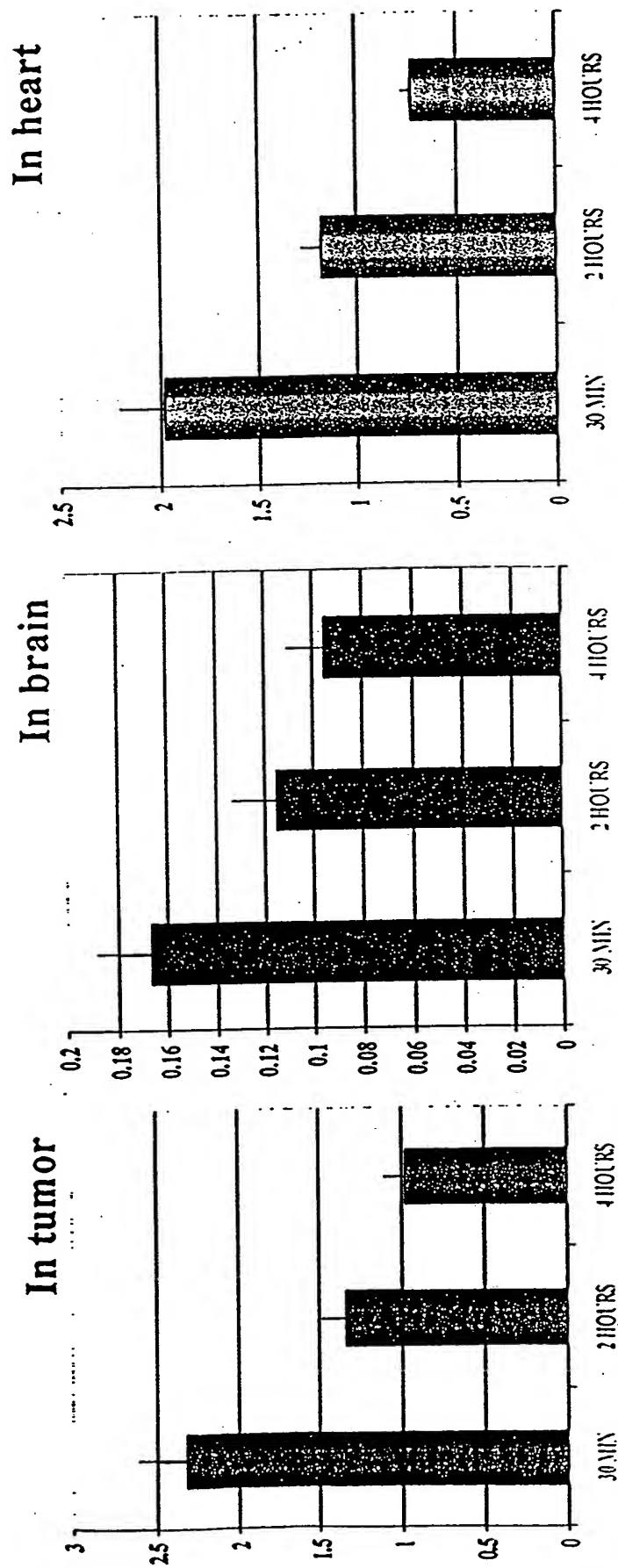
**FIG. 77** In vivo biodistribution of  $^{99m}\text{Tc}$ -EC-deoxyglucose in breast tumor-bearing rats.

# *In Vivo* Uptake of $^{99m}\text{Tc}$ -EC-Deoxyglucose in Lung Tumor-Bearing Nude Mice



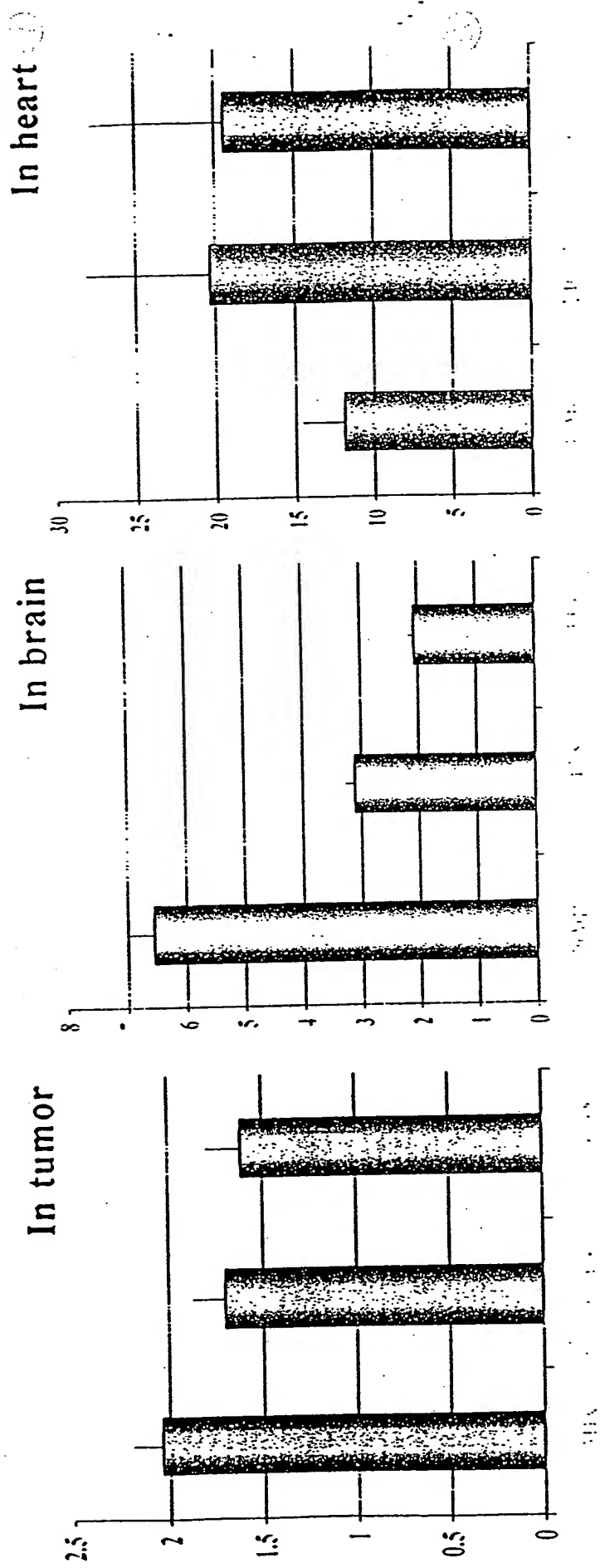
**FIG. 78** In vivo tissue uptake of  $^{99m}\text{Tc}$ -EC-deoxyglucose in lung tumor-bearing mice.

# *In Vivo* Uptake of $^{99m}\text{Tc}$ -EC-Neomycin in Lung Tumor-Bearing Nude Mice



**FIG. 79** In vivo tissue uptake of  $^{99m}\text{Tc}$ -EC-neomycin in lung tumor-bearing mice.

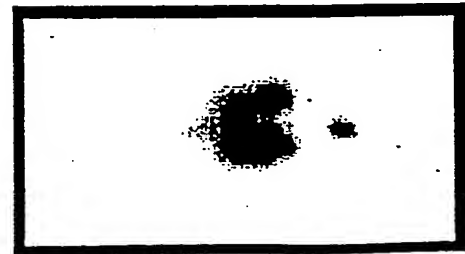
# *In Vivo* Uptake of $^{18}\text{F}$ FDG in Lung Tumor-Bearing Nude Mice



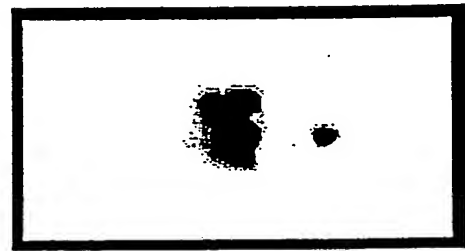
**FIG. 80** In vivo tissue uptake of  $^{18}\text{F}$ FDG in lung tumor-bearing mice.

$^{99m}\text{Tc-EC}$

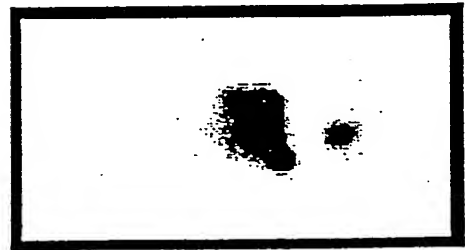
$^{99m}\text{Tc-EC-Glucose(6)}$



0.5



2



4hrs



0.5



2



4hrs

Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Glucose(6)}$  ( $100\mu\text{Ci/rat}$ , iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

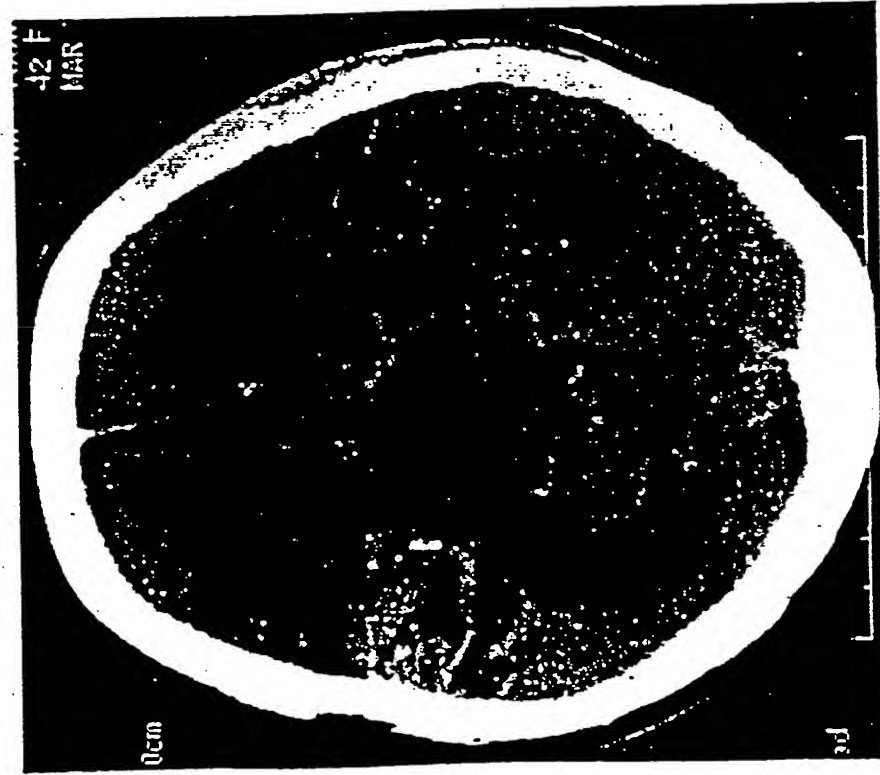
FIG. 81

Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-deoxyglucose}$  ( $100\mu\text{Ci/rat}$ , iv.) showed that the tumor could be well visualized from 0.5-4 hours

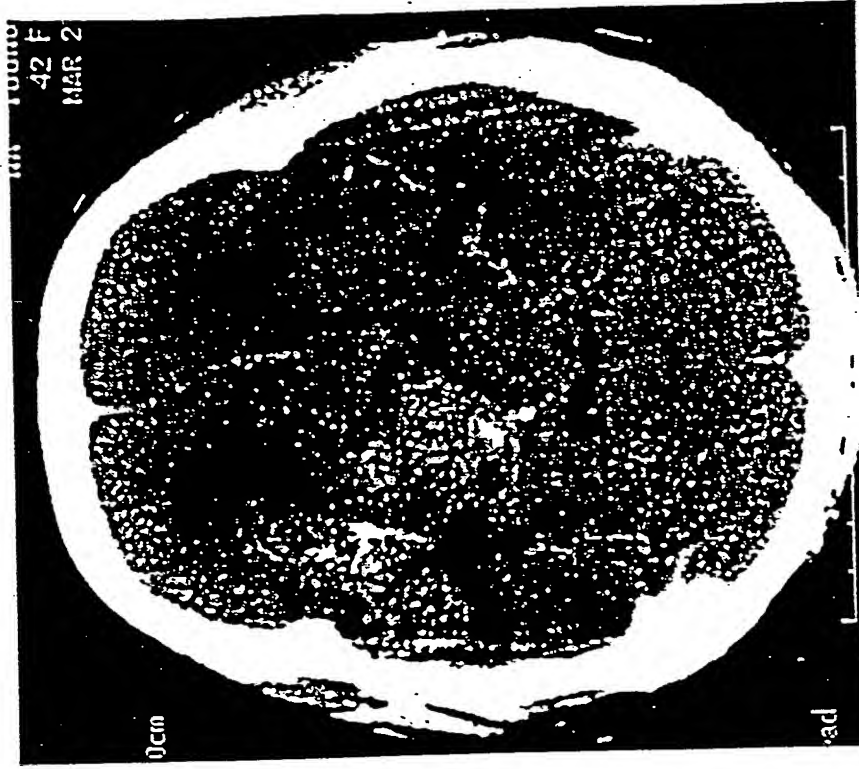


Case 11/42

Dx : anaplastic astrocytoma



Pre OP



Post OP

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WONKWANG INTV HOSP



99mTc EC DG 1.5H

5



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7



8



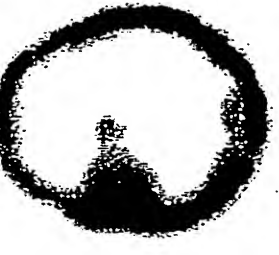
9



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INFERIOR->SUPERIOR

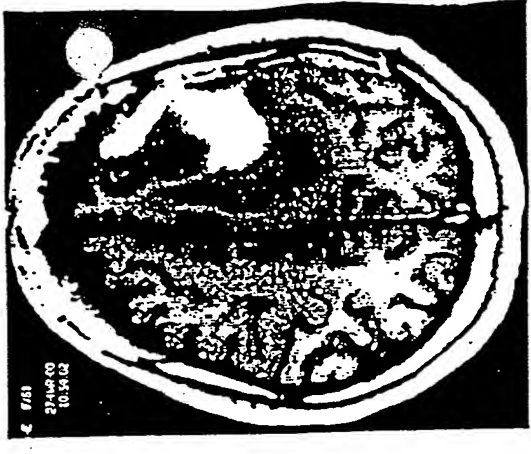
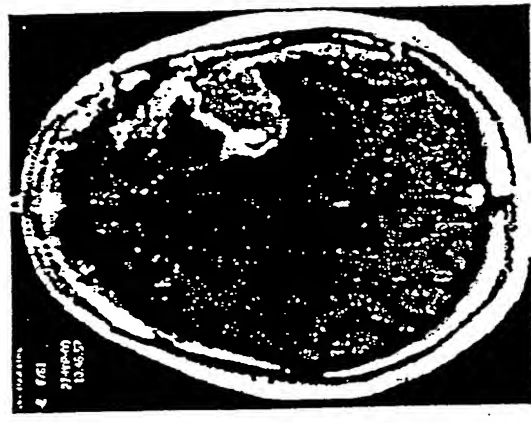
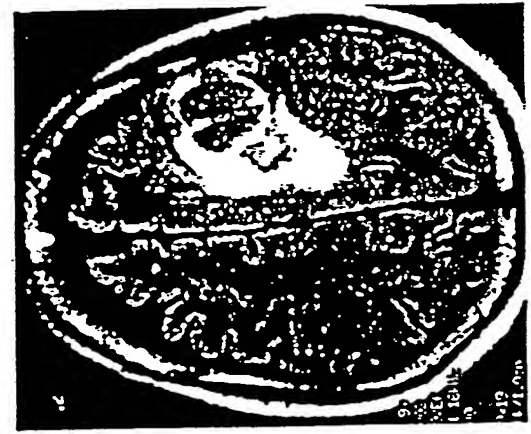
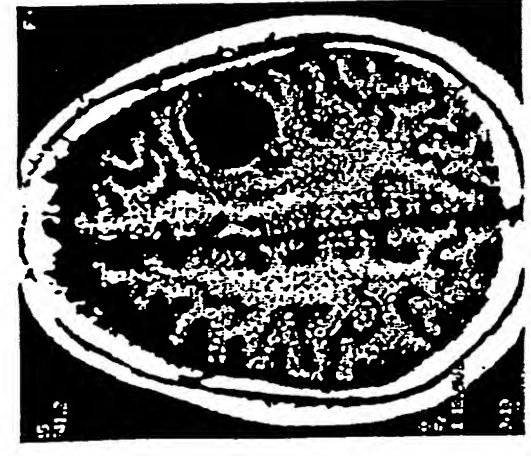
EC--DG Scan

POD-25D

99mTc EC DG 1.5H patient with atrioventricular

Case 33-1761

Dx: anaplastic astrocytoma with hemorrhage

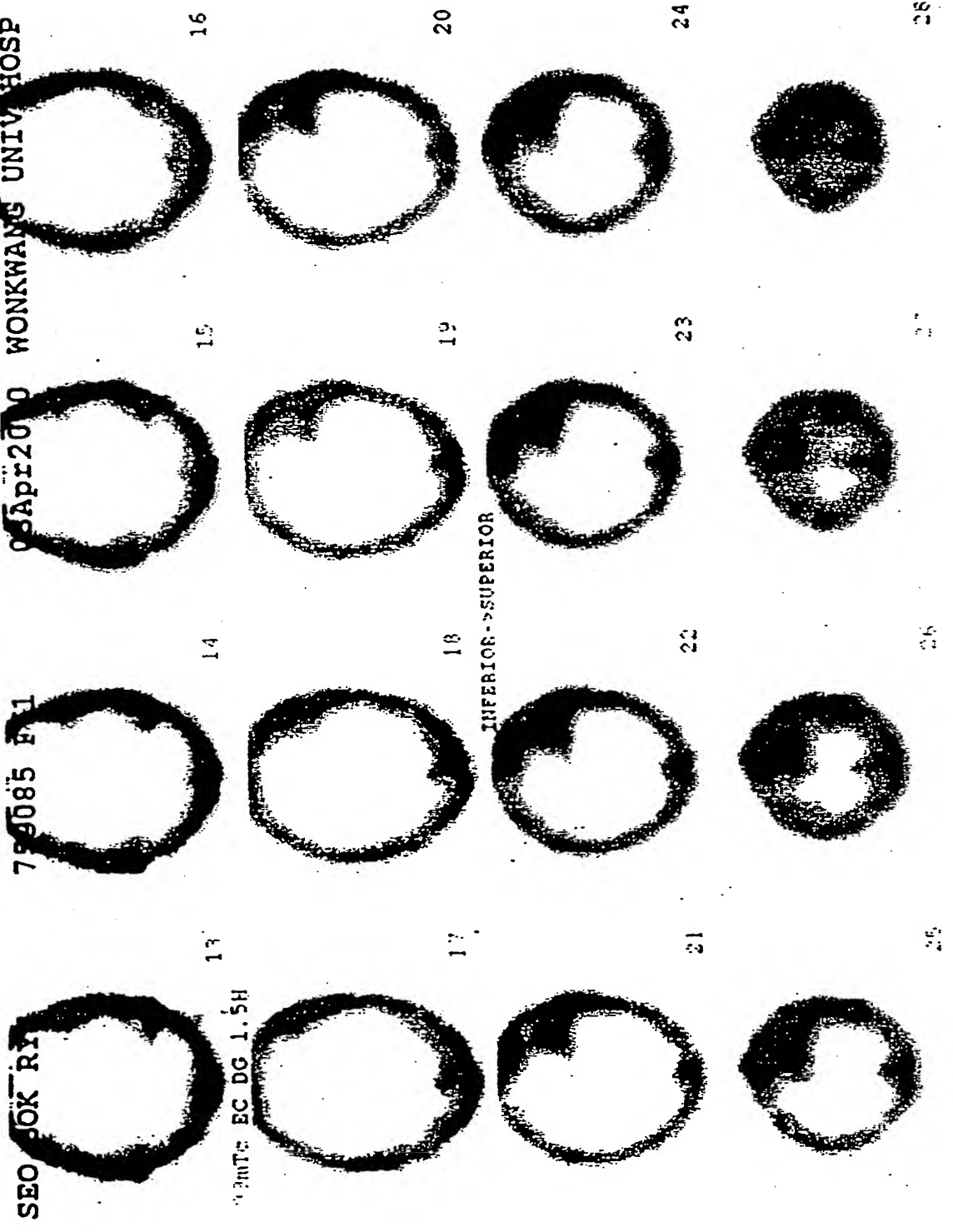


Pre -OP

Post-OP

FIG. 83A MRI of a patient with hemorrhagic astrocytoma.

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EC-DG Scan POD-26D

FIG. 83B SPECT with <sup>99m</sup>Tc-EC-DG of a patient with astrocytoma.

Case 5 : M/62

Dx : Meningioma

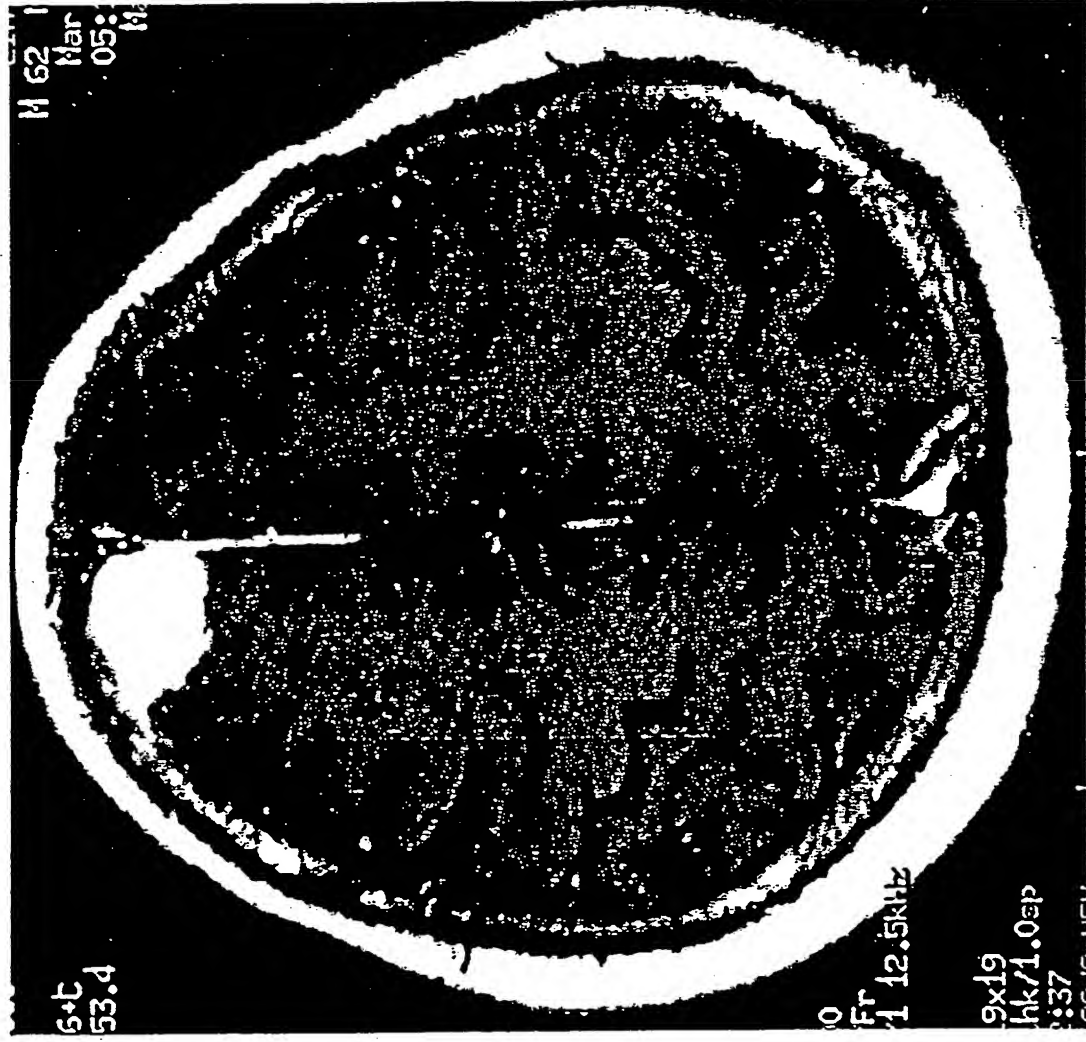


FIG. 84A

MRI of a patient with benign meningioma.

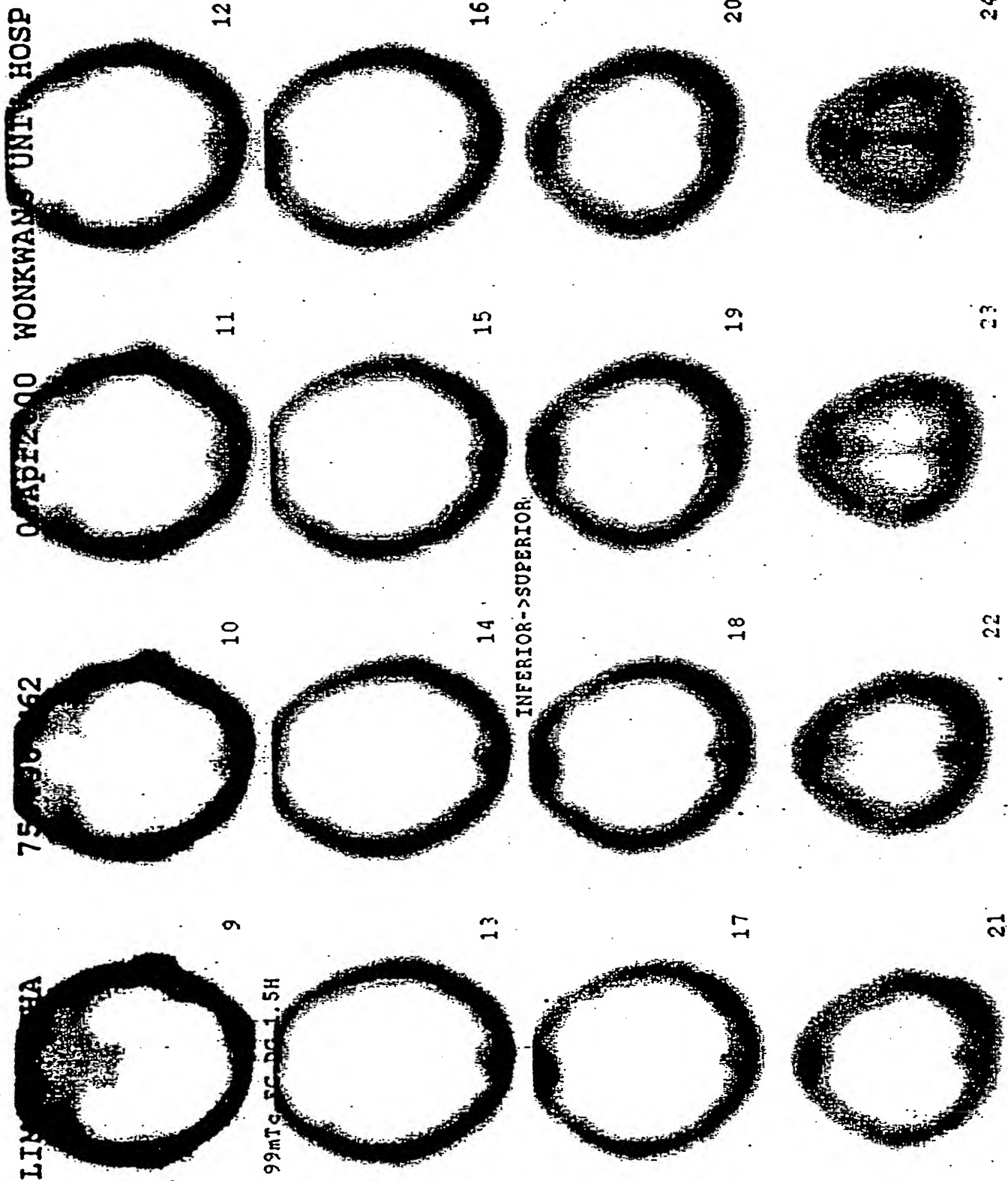


FIG. 84B SPECT with  $^{99m}\text{Tc}$ -EC-DG of a patient with benign meningioma

CASE 4. M/77

Dx: Pul.module (only necrotic material on biopsy)

TB pleurisy

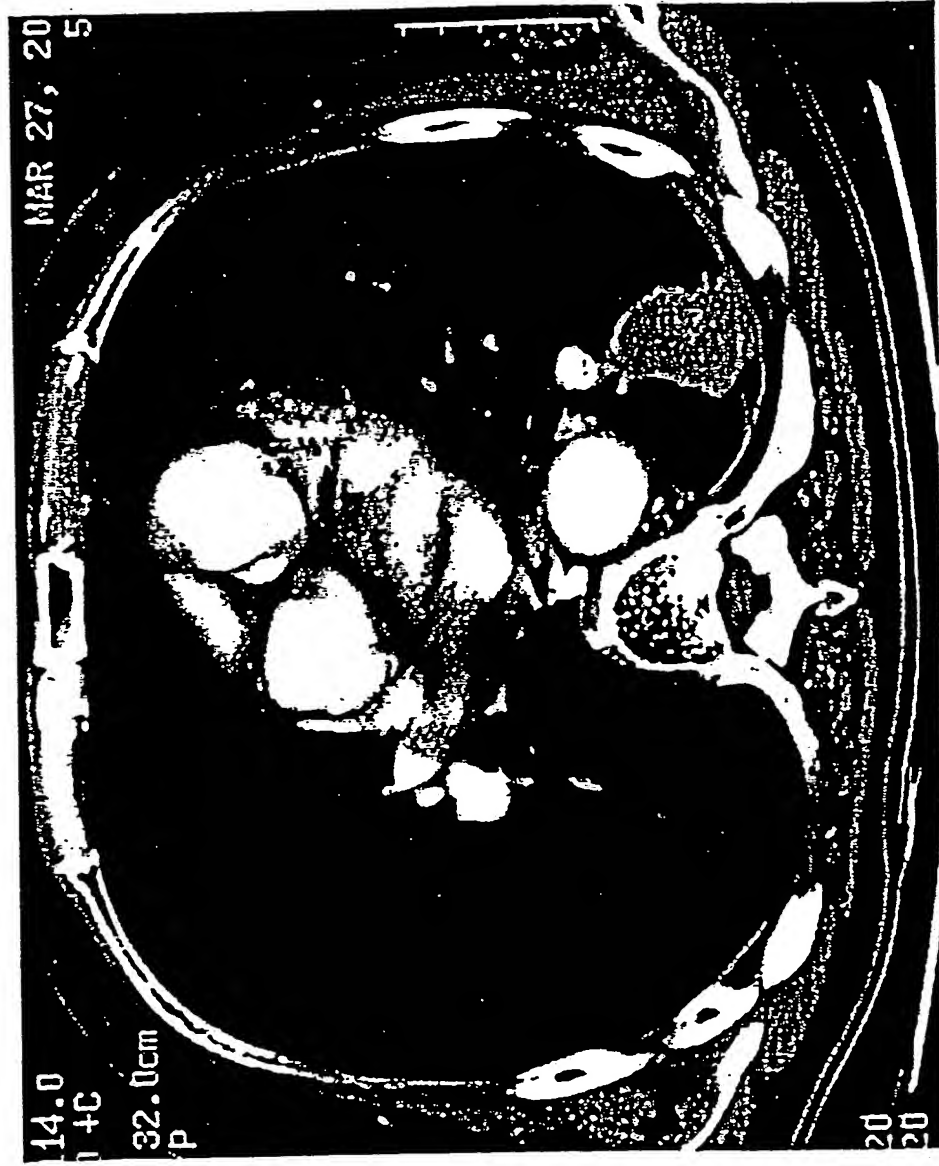


FIG. 85A CT of a patient with TB in lung.



**WONKWANG BANK-OSB**

INFERIOR->SUPERIOR

**SPECT with  $^{99m}\text{Tc-EC-DG}$  of a patient with TB showed no focal**



Case 5 : 59/M

Dx: Squamous carcinoma



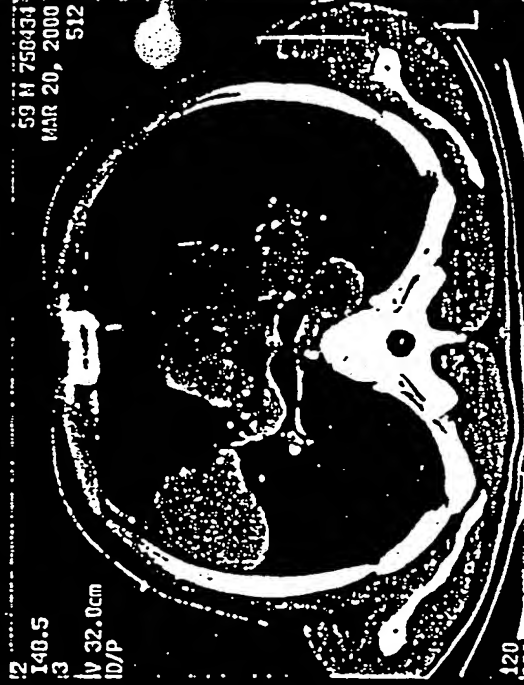
Pre RTX



Post RTX



Pre RTX



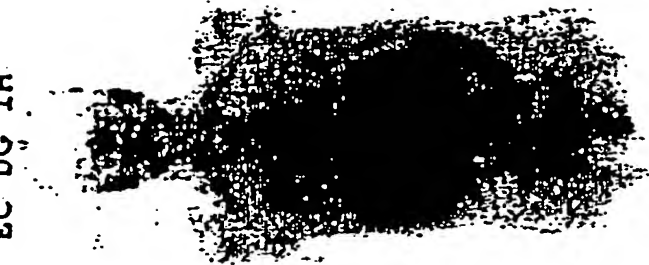
Post RTX

JUNG KI WOON  
EC DG 1H

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R

L



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ANT

LUNG CANCER POST RTX 1HK

ANT

POST

EC

FIG. 86B

Whole body images of  $^{99m}\text{Tc}$ -EC-DG of a patient with lung

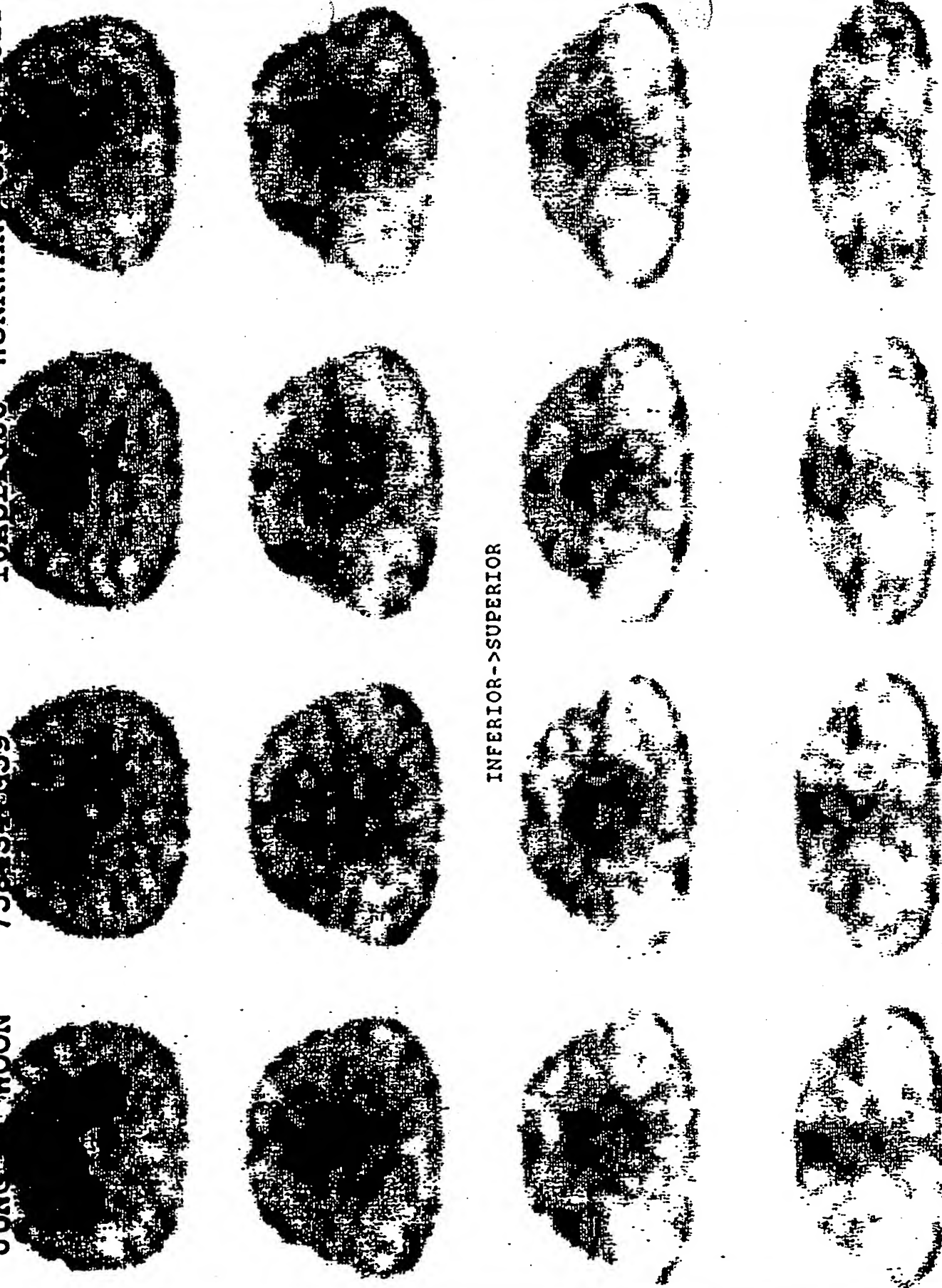
cancer

JUN 10 11:00 AM

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INFERIOR -> SUPERIOR

EC DG 1H 30 MIN LUNG CANCER POST RTX 1WK

SPECT with  $^{99m}\text{Tc}$ -EC-DG of a patient with lung cancer, the tumor showed focal intensified uptake.

FIG. 86C